```
=> fil reg; d ide
FILE 'REGISTRY' ENTERED AT 16:04:48 ON 01 FEB 2006
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:   31 JAN 2006  HIGHEST RN 873191-05-0
DICTIONARY FILE UPDATES:  31 JAN 2006  HIGHEST RN 873191-05-0

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TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

  Please note that search-term pricing does apply when
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**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html


L12  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   110-26-9 REGISTRY
ED   Entered STN:  16 Nov 1984
CN   2-Propenamide, N,N'-methylenebis- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Acrylamide, N,N'-methylenebis- (6CI, 7CI, 8CI)
OTHER NAMES:
CN   Bisacrylamide
CN   MBA
CN   Methylenebisacrylamide
CN   Methylenediacrylamide
CN   N,N'-Diacryloylmethylenediamine
CN   N,N'-Methylenebis(2-propenamide)
CN   N,N'-Methylenebis(acrylamide)
CN   N,N'-Methylenediacrylamide
CN   NSC 406836
CN   NSC 7774
CN   Triam 507
FS   3D CONCORD
MF   C7 H10 N2 O2
```
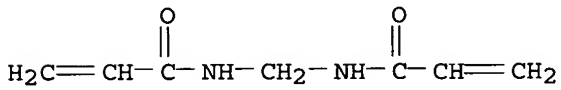

crosslinker

CI COM
LC STN Files: AGRICOLA, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

2046 REFERENCES IN FILE CA (1907 TO DATE)
290 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2047 REFERENCES IN FILE CAPLUS (1907 TO DATE)
32 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=>

=> fil capl; d que l1; d que l5; d que l9
FILE 'CAPLUS' ENTERED AT 17:40:22 ON 01 FEB 2006
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Inventor search

FILE COVERS 1907 - 1 Feb 2006 VOL 144 ISS 6
FILE LAST UPDATED: 31 Jan 2006 (20060131/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L1 1 SEA FILE=CAPLUS ABB=ON US2003-643631/AP

L2 78 SEA FILE=CAPLUS ABB=ON TAMADA J?/AU

```
L3          182 SEA FILE=CAPLUS ABB=ON  TIERNEY M?/AU
L4         2846 SEA FILE=CAPLUS ABB=ON  WILLIAMS S?/AU
L5            3 SEA FILE=CAPLUS ABB=ON  L2 AND L3 AND L4



L2           78 SEA FILE=CAPLUS ABB=ON  TAMADA J?/AU
L3          182 SEA FILE=CAPLUS ABB=ON  TIERNEY M?/AU
L4         2846 SEA FILE=CAPLUS ABB=ON  WILLIAMS S?/AU
L6         6876 SEA FILE=CAPLUS ABB=ON  HYDROGELS/CT
L8       103503 SEA FILE=CAPLUS ABB=ON  SKIN/CT
L9            7 SEA FILE=CAPLUS ABB=ON  (L2 OR L3 OR L4) AND L6 AND L8


=> s l1 or l5 or l9

L180          9 L1 OR L5 OR L9

=> fil uspatf; d que l59; d que l63

FILE 'USPATFULL'.ENTERED AT 17:40:24 ON 01 FEB 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 31 Jan 2006 (20060131/PD)
FILE LAST UPDATED: 31 Jan 2006 (20060131/ED)
HIGHEST GRANTED PATENT NUMBER: US6993790
HIGHEST APPLICATION PUBLICATION NUMBER: US2006021102
CA INDEXING IS CURRENT THROUGH 31 Jan 2006 (20060131/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 31 Jan 2006 (20060131/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2005



L55          45 SEA FILE=USPATFULL ABB=ON  TAMADA J?/AU
L56          76 SEA FILE=USPATFULL ABB=ON  TIERNEY M?/AU
L57         600 SEA FILE=USPATFULL ABB=ON  WILLIAMS S?/AU
L59           1 SEA FILE=USPATFULL ABB=ON  L55 AND L56 AND L57



L55          45 SEA FILE=USPATFULL ABB=ON  TAMADA J?/AU
L56          76 SEA FILE=USPATFULL ABB=ON  TIERNEY M?/AU
L57         600 SEA FILE=USPATFULL ABB=ON  WILLIAMS S?/AU
L58        1253 SEA FILE=USPATFULL ABB=ON  HYDROGELS/CT
L60          12 SEA FILE=USPATFULL ABB=ON  (L55 OR L56 OR L57) AND L58
L61       12030 SEA FILE=USPATFULL ABB=ON  SKIN/CT
L62        3176 SEA FILE=USPATFULL ABB=ON  TRANSDERM?/IT
L63          11 SEA FILE=USPATFULL ABB=ON  L60 AND (L61 OR L62)


=> s l59 or l63

L181         11 L59 OR L63

=> fil wpids;d que l78;d que l80

FILE 'WPIDS' ENTERED AT 17:40:25 ON 01 FEB 2006
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```

FILE LAST UPDATED: 30 JAN 2006 <20060130/UP>
MOST RECENT DERWENT UPDATE: 200607 <200607/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

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FOR FURTHER DETAILS:
http://scientific.thomson.com/support/products/dwpifv/

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PLEASE CHECK:
http://scientific.thomson.com/support/patents/dwpiref/reftools/classification

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

```
L72          22 SEA FILE=WPIDS ABB=ON  TAMADA J?/AU
L73          48 SEA FILE=WPIDS ABB=ON  TIERNEY M?/AU
L74         619 SEA FILE=WPIDS ABB=ON  WILLIAMS S?/AU
L78           1 SEA FILE=WPIDS ABB=ON  L72 AND L73 AND L74



L72          22 SEA FILE=WPIDS ABB=ON  TAMADA J?/AU
L73          48 SEA FILE=WPIDS ABB=ON  TIERNEY M?/AU
L74         619 SEA FILE=WPIDS ABB=ON  WILLIAMS S?/AU
L75        6388 SEA FILE=WPIDS ABB=ON  HYDROGEL# OR HYDRO GEL#
L76        4962 SEA FILE=WPIDS ABB=ON  TRANSDERM?
L77      139869 SEA FILE=WPIDS ABB=ON  SKIN
L80          11 SEA FILE=WPIDS ABB=ON  (L72 OR L73 OR L74) AND L75 AND (L76 OR
                L77)


=> s l78 or l80

L182         11 L78 OR L80

=> fil biosis; d que l95

FILE 'BIOSIS' ENTERED AT 17:40:28 ON 01 FEB 2006
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.
```

RECORDS LAST ADDED: 25 January 2006 (20060125/ED)

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L90         4868 SEA FILE=BIOSIS ABB=ON  HYDROGEL# OR HYDRO GEL#
L91           74 SEA FILE=BIOSIS ABB=ON  TAMADA J?/AU
L92          209 SEA FILE=BIOSIS ABB=ON  TIERNEY M?/AU
L93         4619 SEA FILE=BIOSIS ABB=ON  WILLIAMS S?/AU
L95            3 SEA FILE=BIOSIS ABB=ON  (L91 OR L92 OR L93) AND L90
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```
=> fil embase; d que l160

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 FILE COVERS 1974 TO 26 Jan 2006 (20060126/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

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 substance identification.
```

```
L153          51 SEA FILE=EMBASE ABB=ON  TAMADA J?/AU
L154         145 SEA FILE=EMBASE ABB=ON  TIERNEY M?/AU
L155        3019 SEA FILE=EMBASE ABB=ON  WILLIAMS S?/AU
L156        4322 SEA FILE=EMBASE ABB=ON  HYDROGEL/CT
L160           3 SEA FILE=EMBASE ABB=ON  (L153 AND L154 AND L155) OR ((L153 OR
                 L154 OR L155) AND L156)
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```
=> fil BIOTECHNO, CEABA-VTB, ANABSTR
FILE 'BIOTECHNO' ENTERED AT 17:41:18 ON 01 FEB 2006
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=> d que l119

L2            78 SEA FILE=CAPLUS ABB=ON  TAMADA J?/AU
L3           182 SEA FILE=CAPLUS ABB=ON  TIERNEY M?/AU
L4          2846 SEA FILE=CAPLUS ABB=ON  WILLIAMS S?/AU
L107          21 SEA L2
L108          47 SEA L3
L109         691 SEA L4
L110        2340 SEA HYDROGEL# OR HYDRO GEL#
L119           4 SEA (L107 OR L108 OR L109) AND L110
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```
=> fil medl; d que l135

FILE 'MEDLINE' ENTERED AT 17:41:20 ON 01 FEB 2006
```

FILE LAST UPDATED: 1 FEB 2006 (20060201/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 will soon be available. For details on the 2005 reload, enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate

```
L131          57 SEA FILE=MEDLINE ABB=ON  TAMADA J?/AU
L132         136 SEA FILE=MEDLINE ABB=ON  TIERNEY M?/AU
L133        3592 SEA FILE=MEDLINE ABB=ON  WILLIAMS S?/AU
L134        1106 SEA FILE=MEDLINE ABB=ON  HYDROGEL/CT
L135           0 SEA FILE=MEDLINE ABB=ON  (L131 AND L132 AND L133) OR ((L131 OR
                 L132 OR L133) AND L134)


=> => dup rem l180,l160,l119,l95,l182,l181
FILE 'CAPLUS' ENTERED AT 17:42:18 ON 01 FEB 2006
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FILE 'USPATFULL' ENTERED AT 17:42:18 ON 01 FEB 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)
PROCESSING COMPLETED FOR L180
PROCESSING COMPLETED FOR L160
PROCESSING COMPLETED FOR L119
PROCESSING COMPLETED FOR L95
PROCESSING COMPLETED FOR L182
PROCESSING COMPLETED FOR L181
L183          32 DUP REM L180 L160 L119 L95 L182 L181 (9 DUPLICATES REMOVED)
                 ANSWERS '1-9' FROM FILE CAPLUS
```

ACCESSION NUMBER: 2003:507747 CAPLUS
DOCUMENT NUMBER: 139:65697
TITLE: Biosensor, iontophoretic sampling system, and methods of use thereof
INVENTOR(S): Kim, Lynn; Parris, Norman A.; Potts, Russell O.; **Tamada, Janet; Tierney, Michael J.**; Berner, Bret
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 18 pp., Cont.-in-part of U. S. Ser. No. 174,902, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| US 6587705 | B1 | 20030701 | US 1999-267750 | | 19990310 |
| CA 2265119 | C | 20021203 | CA 1999-2265119 | | 19990310 |
| CA 2265119 | AA | 19990913 | | | |
| JP 2000000227 | A2 | 20000107 | JP 1999-67431 | | 19990312 |
| JP 3155523 | B2 | 20010409 | | | |
| AT 219245 | E | 20020615 | AT 1999-301887 | | 19990312 |
| PT 942278 | T | 20021129 | PT 1999-301887 | | 19990312 |
| ES 2178349 | T3 | 20021216 | ES 1999-301887 | | 19990312 |
| US 6816742 | B2 | 20041109 | US 2004-778721 | | 20040213 |
| US 2005027179 | A1 | 20050203 | US 2004-936095 | | 20040908 |
| PRIORITY APPLN. INFO.: | | | US 1998-77993P | P | 19980313 |
| | | | US 1998-80591P | P | 19980403 |
| | | | US 1998-174902 | B2 | 19981019 |
| | | | US 1999-267750 | A1 | 19990310 |
| | | | US 2003-353734 | A1 | 20030129 |
| | | | US 2004-778721 | A1 | 20040213 |

ED Entered STN: 03 Jul 2003
AB An automated system for continual transdermal extraction of analytes present in a biol. system is provided. The system can be used for detecting and/or measuring the concentration of the analyte using an electrochem. biosensor detection means. The system optionally uses reverse iontophoresis to carry out the continual transdermal extraction of the analytes.
IC ICM A61F007-00
INCL 600347000; 600365000; 435014000; 204400000; 204403000
CC 9-1 (Biochemical Methods)
IT Binders
Biosensors
Buffers
Collecting apparatus
Concentration (condition)
Electric current
Electrodes
Electroporation
**Hydrogels**
Iontophoresis
Laser radiation
Mammalia
Reaction
Reference electrodes
Sampling apparatus
Sensors
**Skin**

ANSWERS '10-12' FROM FILE EMBASE
ANSWERS '13-15' FROM FILE ANABSTR
ANSWER '16' FROM FILE BIOSIS
ANSWERS '17-24' FROM FILE WPIDS
ANSWERS '25-32' FROM FILE USPATFULL

=> d ibib ed abs hitind 1-9; d iall 10-24; d ibib ab 25-32

L183 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2004:372890 CAPLUS
DOCUMENT NUMBER: 140:388254
TITLE: Hydrogel compositions containing hydrophilic polymer and phosphate buffer for enhancement of transdermal extraction of analyte
INVENTOR(S): **Tamada, Janet A.; Tierney, Michael J.; Williams, Stephen C.**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 35 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| US 2004087671 | A1 | 20040506 | US 2003-643631 | | 20030818 <-- |
| PRIORITY APPLN. INFO.: | | | US 2002-404807P | P | 20020819 |

ED Entered STN: 07 May 2004
AB The present invention relates to compns. for use in analyte monitoring devices. These compns. are useful to increase the flux of analyte across skin, tissue or mucosal surfaces. The compns. include hydrogels and collection reservoir systems comprising ionically conductive materials. Chemical, the hydrogel comprises of a hydrophilic polymer, an electrolyte and a phosphate buffer. The present invention also includes methods of making/manufacturing hydrogels or collection reservoir systems, collection assemblies comprising the hydrogels, electrode assemblies in combination with the hydrogels or collection reservoir systems, and methods of using the same. More specifically, the hydrogel/electrode assembly can be used to extract blood glucose from needed mammalian subjects. For example, the hydrogel containing 10.0% polyethylene oxide, 1% methylene bisacrylamide, 0.52% sodium monobasic phosphate, 4.34% sodium dibasic phosphate, 0.9% sodium chloride, 0.2% undecylenic acid and 0.5% glucose oxidase with 200mM total amount of phosphate was found to have a much better performance of extracting blood glucose through skin than the hydrogel containing 100mM phosphate buffer.
IC ICM C08J003-02
INCL 516099000
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 1, 63
IT Buffers
**Hydrogels**
(hydrogel compns. containing hydrophilic polymer and phosphate buffer for enhancement of transdermal extraction of analyte)
IT **Skin**
(stratum corneum; devices for extraction of analyte through tissue surface by iontophoresis)

L183 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

Solutions
Surface area
Temperature
Time
(biosensor, iontophoretic sampling system, and methods of use)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L183 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2000:768918 CAPLUS
DOCUMENT NUMBER: 133:293184
TITLE: Electrode with improved signal to noise ratio
INVENTOR(S): Kurnik, Ronald T.; **Tamada, Janet**; **Tierney, Michael J.**
PATENT ASSIGNEE(S): Cygnus, Inc., USA
SOURCE: U.S., 17 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| US 6139718 | A | 20001031 | US 1997-824143 | | 19970325 |
| WO 9842252 | A1 | 19981001 | WO 1998-US55100 | | 19980316 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | | |
| JP 2000510373 | T2 | 20000815 | JP 1998-545762 | | 19980316 |
| JP 3373530 | B2 | 20030204 | | | |
| US 38775 | E | 20050816 | US 2002-285659 | | 20021030 |
| US 38681 | E | 20050104 | US 2002-308407 | | 20021202 |
| PRIORITY APPLN. INFO.: | | | US 1997-824143 | A | 19970325 |
| | | | WO 1998-US5100 | W | 19980316 |

ED Entered STN: 02 Nov 2000
AB An electrode assembly for sensing an electrochem. signal diffused from a source to a working electrode which is comprised of a plurality of substantially separated working electrode surfaces is disclosed. The electrode of the invention is comprised of (1) a working electrode made up of a plurality of working electrode surfaces or components and (2) a elec. insulating gap defined by adjacent edges of (1) insulating the working electrode surfaces or components from each other. The working electrode components are configured to receive electrochem. signal from two or preferably three dimensions simultaneously. The working electrode components configured over the same surface as a single electrode provide (1) an improved signal to noise ratio as compared to a single electrode by reducing noise, and (2) provide an overall enhanced signal after sensing for a given period of time.
IC ICM G01N027-26
INCL 205777500
CC 9-1 (Biochemical Methods)
IT Electric current
Electric insulators
Electric noise

Electrochemical analysis
Electrodes
Electrolytes
Electroosmosis
**Hydrogels**
Mammal (Mammalia)
Oxidation, electrochemical
Reference electrodes
**Skin**
Thickness
(electrode with improved signal to noise ratio)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L183 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1999:699604 CAPLUS
DOCUMENT NUMBER: 131:283594
TITLE: Biosensor with reverse iontophoretic sampling system
INVENTOR(S): Kim, Lynn; Parris, Norman A.; Potts, Russell O.; **Tamada, Janet A.; Tierney, Michael J.**
PATENT ASSIGNEE(S): Cygnus, Inc., USA
SOURCE: Brit. UK Pat. Appl., 61 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| GB 2335278 | A1 | 19990915 | GB 1999-5831 | | 19990312 |
| GB 2335278 | B2 | 20000216 | | | |
| CA 2265119 | C | 20021203 | CA 1999-2265119 | | 19990310 |
| CA 2265119 | AA | 19990913 | | | |
| JP 2000000227 | A2 | 20000107 | JP 1999-67431 | | 19990312 |
| JP 3155523 | B2 | 20010409 | | | |
| AT 219245 | E | 20020615 | AT 1999-301887 | | 19990312 |
| PT 942278 | T | 20021129 | PT 1999-301887 | | 19990312 |
| ES 2178349 | T3 | 20021216 | ES 1999-301887 | | 19990312 |
| PRIORITY APPLN. INFO.: | | | US 1998-77993P | P | 19980313 |
| | | | US 1998-80591P | P | 19980403 |
| | | | US 1998-174902 | A | 19981019 |

ED Entered STN: 03 Nov 1999
AB The system exts. an analyte such as glucose transdermally into reservoirs by reverse iontophoresis using annular electrodes. The reservoirs comprise hydrogel containing an ionically conducting medium and an enzyme which reacts with the analyte to form hydrogen peroxide and the concentration of the analyte which results in the reservoir is submillimolar. Sensing elements comprising sensing electrodes, reference electrodes, and the annular iontophoresis electrodes sense the hydrogen peroxide electrochem. and produce a signal related to analyte concentration The sensing electrodes have an area of 0.1-3 cm2, a background current from 2-60 nA and a sensitivity of 6-180 nA/μM of hydrogen peroxide in a buffer solution of 0.6V. The iontophoresis electrodes have an area of 0.3-1.0 cm2 and are capable of repeated cycles of current in the range of 0.01-1.0 mA/cm2.
IC ICM C12Q001-00
ICS G01N033-487
CC 9-1 (Biochemical Methods)

IT Biosensors
Buffers
Electrodes
**Hydrogels**
Mammal (Mammalia)
Reference electrodes
Sampling apparatus
**Skin**
(biosensor with reverse iontophoretic sampling system)

L183 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1997:281194 CAPLUS
DOCUMENT NUMBER: 126:261249
TITLE: Chemical signal-impermeable mask
INVENTOR(S): Kurnik, Ronald T.; **Tamada, Janet**; **Tierney, Michael**
PATENT ASSIGNEE(S): Cygnus, Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| WO 9710356 | A1 | 19970320 | WO 1996-US11776 | | 19960716 |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN | | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN | | | | | |
| CA 2229509 | AA | 19970320 | CA 1996-2229509 | | 19960716 |
| CA 2229509 | C | 20011009 | | | |
| AU 9664973 | A1 | 19970401 | AU 1996-64973 | | 19960716 |
| AU 703849 | B2 | 19990401 | | | |
| EP 876501 | A1 | 19981111 | EP 1996-924546 | | 19960716 |
| EP 876501 | B1 | 20010404 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | | |
| JP 11512316 | T2 | 19991026 | JP 1997-511924 | | 19960716 |
| AT 200305 | E | 20010415 | AT 1996-924546 | | 19960716 |
| ES 2155615 | T3 | 20010516 | ES 1996-924546 | | 19960716 |
| PT 876501 | T | 20010731 | PT 1996-924546 | | 19960716 |
| GR 3036141 | T3 | 20010928 | GR 2001-400995 | | 20010627 |
| PRIORITY APPLN. INFO.: | | | US 1995-527061 | A | 19950912 |
| | | | WO 1996-US11776 | W | 19960716 |

ED Entered STN: 02 May 1997
AB A chemical signal-impermeable mask is positioned in the electrolyte flow such that the mask is between a source of chemical signal and a working electrode which senses the chemical signal transported from the source (e.g., by diffusion). The configuration of the mask is such that the mask prevents substantially all chemical signal transport from the chemical signal source, especially a medically important mol., having a radial vector component relative to a plane of the mask, and the catalytic face of the working electrode, thus allowing primarily only chemical signal transport that is substantially perpendicular to the place of the mask and the catalytic surface of the working electrode. By reducing or eliminating chemical signal radial

transport toward the working electrode, the mask thus significantly reduces or eliminates edge effects. By substantially reducing edge effects created by radial transport of chemical signal, it is possible to obtain a more accurate measurement of the amount (e.g., concentration) of chemical signal that is transported from a given area of source material. An example is given of the determination of blood glucose by noninvasive measurements on the skin of a mammal, using glucose oxidase and H2O2 detection.

IC ICM C12Q001-00
ICS A61B005-00; A61N001-30

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 72, 80

IT Electrodes
Enzyme electrodes
Glucose sensors
**Hydrogels**
Iontophoresis
Mammal (Mammalia)
Simulation and Modeling, physicochemical
**Skin**
(chemical signal-impermeable mask in electrode for noninvasive biochem. anal.)

L183 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:851498 CAPLUS
DOCUMENT NUMBER: 135:354984
TITLE: Performance and reliability of glucose biosensors
INVENTOR(S): Parris, Norman A.; Potts, Russell O.; **Tierney, Michael**; Uhegbu, Christopher
PATENT ASSIGNEE(S): Cygnus, Inc., USA
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| WO 2001088534 | A2 | 20011122 | WO 2001-US15569 | | 20010514 |
| W: CA, JP | | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | | |
| US 2002026110 | A1 | 20020228 | US 2001-859218 | | 20010514 |
| US 6885883 | B2 | 20050426 | | | |
| US 2005130249 | A1 | 20050616 | US 2005-42865 | | 20050124 |
| PRIORITY APPLN. INFO.: | | | US 2000-204397P | P | 20000516 |
| | | | US 2000-244078P | P | 20001027 |
| | | | US 2001-859218 | A3 | 20010514 |

ED Entered STN: 23 Nov 2001

AB The present invention relates to a predictive-kinetic method for use with data processing of a sensor-generated signal, as well as, microprocessors and monitoring systems employing such a predictive-kinetic method. Data from a transient region of a signal is used with suitable models and curve-fitting methods to predict the signal that would be measured for the system at the completion of the reaction. The values resulting from data processing of sensor response using the methods of the present invention are less sensitive to measurement variables. A glucose biosensor performance and reliability is described. The signal response curve

comprises of measurement of current over time and employing a math. model and a kinetic algorithm anal.
IC ICM G01N033-50
CC 9-1 (Biochemical Methods)
IT Blood analysis
Diabetes mellitus
Diffusion
Extraction
Glucose sensors
**Hydrogels**
Iontophoresis
Mucous membrane
Reaction kinetics
Simulation and Modeling, physicochemical
**Skin**
Test kits
(performance and reliability of glucose biosensors)

L183 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:341381 CAPLUS
DOCUMENT NUMBER: 133:131907
TITLE: Glucose monitoring via reverse iontophoresis
AUTHOR(S): Ackerman, Neil; Berner, Bret; Biegajski, Jim; Chen, Qiang; Chen, Hilary; Conn, Tom; Dehal, Hardip; Dunn, Tim; Ewing, Al; Fermi, Steve; Ford, Russell; Jagasia, Priya; Jayalakshmi, Yalia; Joshi, Priti; Kersten, Brian; Kurnik, Ronald; Lake, Tim; Lesho, Matt; Lin, Jan-Ping; Liu, David; Lopatin, Margarita; Mack, Lexa; Messenger, Heather; Morley, Sam; Oliva, Michelle; Parris, Norman; Potts, Russell; Pudlo, Jeff; Reidy, Michael; Soni, Pravin; **Tamada, Janet**; **Tierney, Michael**; Uhegbu, Christopher; Vijayakumar, Prema; Wei, Charles; **Williams, Steve**; Wilson, Don; Wu, Christine
CORPORATE SOURCE: Cygnus, Inc., Redwood City, CA, 94063, USA
SOURCE: ACS Symposium Series (2000), 752(Controlled Drug Delivery), 273-282
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 23 May 2000
AB The non-invasive method described here exts. glucose through the skin using an applied potential (a process known as reverse iontophoresis), and measures the extracted sample using an electrochem./enzymic sensor. In this study, the GlucoWatch biographer yields continuous measurements of glucose (3/h) over a 12-h period with accuracy and precision similar to existing, single-point blood measuring device. This non-invasive device holds promise to provide frequent glucose measurements to better guide insulin administration in diabetic subjects, and improve disease management.
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 6, 13, 14, 80
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L183 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:597538 CAPLUS
DOCUMENT NUMBER: 131:196689
TITLE: Biosensor, iontophoretic sampling system and methods of use thereof

INVENTOR(S): Kim, Lynn; Parris, Norman A.; Potts, Russell O.; **Tamada, Janet A.**; **Tierney, Michael J.**
PATENT ASSIGNEE(S): Cygnus, Inc., USA
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| EP 942278 | A2 | 19990915 | EP 1999-301887 | | 19990312 |
| EP 942278 | A3 | 20000614 | | | |
| EP 942278 | B1 | 20020612 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| CA 2265119 | C | 20021203 | CA 1999-2265119 | | 19990310 |
| CA 2265119 | AA | 19990913 | | | |
| JP 2000000227 | A2 | 20000107 | JP 1999-67431 | | 19990312 |
| JP 3155523 | B2 | 20010409 | | | |
| AT 219245 | E | 20020615 | AT 1999-301887 | | 19990312 |
| PT 942278 | T | 20021129 | PT 1999-301887 | | 19990312 |
| ES 2178349 | T3 | 20021216 | ES 1999-301887 | | 19990312 |
| PRIORITY APPLN. INFO.: | | | US 1998-77993P | P | 19980313 |
| | | | US 1998-80591P | P | 19980403 |
| | | | US 1998-174902 | A | 19981019 |

ED Entered STN: 22 Sep 1999
AB An automated system for continual transdermal extraction of analytes present in a biol. system is provided. The system can be used for detecting and/or measuring the concentration of the analyte using an electrochem. biosensor detection means. The system optionally uses reverse iontophoresis to carry out the continual transdermal extraction of the analytes.
IC ICM G01N027-327
ICS C12Q001-00; C12Q001-54; C12M001-40; A61N001-30
CC 9-1 (Biochemical Methods)
IT Biosensors
Electrodes
**Hydrogels**
Reference electrodes
Sampling apparatus
**Skin**
(biosensor, iontophoretic sampling system and methods of use thereof)

L183 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:211200 CAPLUS
DOCUMENT NUMBER: 131:15947
TITLE: Glucose monitoring via reverse iontophoresis
AUTHOR(S): Ackerman, Neil; Berner, Bret; Biegajski, Jim; Chen, Qiang; Chen, Hilary; Conn, Tom; Dehal, Hardip; Dunn, Tim; Ewing, Al; Fermi, Steve; Ford, Russell; Jagasia, Priya; Jayalakshmi, Yalia; Joshi, Priti; Kersten, Brian; Lake, Ronald Kurnik Tim; Lesho, Matt; Lin, Jan-Ping; Liu, David; Lopatin, Margarita; Mack, Lexa; Messenger, Heather; Morley, Sam; Oliva, Michele; Parris, Norman; Potts, Russell; Pudlo, Jeff; Reidy, Michael; Soni, Pravin; **Tamada, Janet**; **Tierney, Michael**; Uhegbu, Chris; Vijayakumar, Prema; Wei, Charles; **Williams, Steve**; Wilson, Don; Wu, Christine

CORPORATE SOURCE: Cygnus, Inc., Redwood City, CA, 94063, USA
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(1), 303-304
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 05 Apr 1999
AB A non-invasive method which extract glucose through the skin using an applied potential and measures the extracted sample using an electrochem./enzymic sensor is described.
CC 9-7 (Biochemical Methods)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L183 ANSWER 10 OF 32 EMBASE  DUPLICATE 3
AN 2001061366 EMBASE
TI Mechanical properties of a novel PVA hydrogel in shear and unconfined compression.
AU Stammen J.A.; **Williams S.**; Ku D.N.; Guldberg R.E.
CS J.A. Stammen, IBB Building, Georgia Institute of Technology, 315 Ferst Drive NW, Atlanta, GA 30332, United States. robert.guldberg@me.gatech.edu
SO Biomaterials, (2001) Vol. 22, No. 8, pp. 799-806. .
Refs: 20
ISSN: 0142-9612 CODEN: BIMADU
PUI S 0142-9612(00)00242-8
CY United Kingdom
DT Journal; Article
FS 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 20010301
Last Updated on STN: 20010301
AB Poly(vinyl alcohol) (PVA) hydrogels have been proposed as promising biomaterials to replace diseased or damaged articular cartilage. A critical barrier to their use as load-bearing tissue replacements is a lack of sufficient mechanical properties. The purpose of this study was to characterize the functional compressive and shear mechanical properties of a novel PVA hydrogel. Two formulations of the biomaterial were tested, one with a lower water content (75% water), and the other with higher water content (80% water). The compressive tangent modulus varied with biomaterial formulation and was found to be statistically strain magnitude and rate dependent. Over a strain range of 10-60%, the compressive modulus increased from approximately 1-18MPa, which is within the range of the modulus of articular cartilage. The shear tangent modulus (0.1-0.4MPa) was also found to be strain magnitude dependent and within the range of normal human articular cartilage, but it was not statistically dependent on strain rate. This behavior was attributed to the dominance of fluid flow and related frictional drag on the viscoelastic behavior. Compressive failure of the hydrogels was found to occur between 45 and 60% strain, depending on water content. Copyright. .COPYRGT. 2001 .
CT Medical Descriptors:
***hydrogel**

*compression
water content
articular cartilage
mechanics
article
priority journal
Drug Descriptors:
*biomaterial
*polyvinyl alcohol
RN (polyvinyl alcohol) 37380-95-3, 9002-89-5
NP Salubria

L183 ANSWER 11 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 6
AN 1999369667 EMBASE
TI Dose control with cell lines used for encapsulated cell therapy.
AU Li R.H.; **Williams S.**; White M.; Rein D.
CS Dr. R.H. Li, Genetics Institute, One Burtt Road, Andover, MA 01810, United States. rli@genetics.com
SO Tissue Engineering, (1999) Vol. 5, No. 5, pp. 453-465. .
Refs: 26
ISSN: 1076-3279 CODEN: TIENFP
CY United States
DT Journal; Article
FS 022 Human Genetics
027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
037 Drug Literature Index
039 Pharmacy
LA English
SL English
ED Entered STN: 19991112
Last Updated on STN: 19991112
AB Cell therapy - use of cells to deliver active factors - is an emerging technique in treatment of neurodegenerative disease. Successful devices maintain cell viability and functionality over extended implant periods. Use of dividing cell lines to deliver therapeutic factors has been studied extensively. One emerging issue is the tendency of cells to continue proliferation within the intracapsular environment - potentially outstripping nutrient supply. This work presents a method of controlling proliferation and delivering therapeutic molecules within a dose range. The method entails encapsulation into a hollow fiber device of discrete numbers of cell- containing microcarriers. Proliferation control is attained by embedding cell-containing microcarriers in nonmitogenic hydrogels. PC-12 cells secreting L-dopa and dopamine was the model cell line tested. Feasibility of the method in controlling growth of normally rapidly dividing cells in the intracapsular environment was demonstrated in vitro and in vivo. Control nonmicrocarrier PC-12 cell devices had .apprx.fourfold greater expansion in cell number compared to experimental microcarrier-containing devices over 4 weeks in vitro and in vivo after implant into rat striatum. Ability to control dose released over a several-fold range was demonstrated with encapsulated PC-12 cells delivering neurotransmitters and C2C12 mouse myoblast cells delivering neurotrophic factors (CNTF).
CT Medical Descriptors:
*adoptive immunotherapy
*encapsulation
*degenerative disease: DT, drug therapy
cell line
cell viability

cell proliferation
cell function
cell growth
cell count
growth regulation
immobilized cell
**hydrogel**
nonhuman
mouse
rat
animal experiment
animal model
controlled study
animal tissue
animal cell
article
priority journal
Drug Descriptors:
*neurotransmitter: DO, drug dose
*neurotransmitter: DT, drug therapy
*neurotransmitter: PR, pharmaceutics
*neurotrophic factor: DO, drug dose
*neurotrophic factor: DT, drug therapy
*neurotrophic factor: PR, pharmaceutics
*biomaterial
levodopa: EC, endogenous compound
RN (levodopa) 59-92-7
NP (1) SEACURE; SeaPrep; SeaPlaque
CO (1) Protan (Norway)

L183 ANSWER 12 OF 32 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
AN 1999408870 EMBASE
TI Noninvasive glucose monitoring: Comprehensive clinical results.
AU **Tamada J.A.**; Garg S.; Jovanovic L.; Pitzer K.R.; Fermi S.; Potts R.O.; Chen Q.; Conn T.; Dunn T.; Jayalakshmi Y.; Kurnik R.; Lake T.; Lesho M.; Lopatin M.; Morley S.; Oliva M.; Parris N.; Reidy M.; Soni P.; **Tierney M.**; Vljayakumar P.; Wei C.; **Williams S.**; Wu C.
CS Dr. R.O. Potts, Cygnus Inc., 400 Penobscot Dr, Redwood City, CA 94063, United States
SO Journal of the American Medical Association, (17 Nov 1999) Vol. 282, No. 19, pp. 1839-1844. .
Refs: 20
ISSN: 0098-7484 CODEN: JAMAAP
CY United States
DT Journal; Article
FS 027 Biophysics, Bioengineering and Medical Instrumentation
LA English
SL English
ED Entered STN: 19991210
Last Updated on STN: 19991210
AB Context. Intensive diabetes management using frequent blood glucose measurements to guide therapy has been shown to significantly improve short- and long-term outcomes. Development of a device that makes possible frequent, automatic, painless, and accurate measurements of glucose would facilitate intensive management. Objective. To determine the accuracy of the GlucoWatch automatic glucose biographer (Cygnus Inc) compared with that of serial blood glucose measurements. Design. Multicenter comparative study of the GlucoWatch biographer and the HemoCue blood glucose analyzer (Aktiebolaget Leo) performed between August 29 and

October 17, 1998. Participants wore up to 2 biographers during the 15-hour study session and performed 2 fingersticks per hour for comparative blood glucose measurements. The biographers were calibrated with a single HemoCue measurement after a 3-hour warm-up period. Diet and insulin were manipulated to produce a broad glycemic range during the study. Setting. Controlled clinical environment at 2 diabetes centers and 3 contract research organizations in the United States. Participants. A total of 92 subjects (mean [SD] age, 42.1 [15.1] years; 59.8% women) with type 1 or 2 diabetes requiring treatment with insulin. Main Outcome Measures. Mean error, mean absolute error, correlation, slope, and intercept using Deming regression, and clinical significance of differences between biographer readings and blood glucose measurements using the Clarke error grid. Results. Results showed close tracking of blood glucose over a range of 2.2 to 22.2 mmol/L (40-400 mg/dL) for up to 12 hours using a single point calibration. The biographer readings lagged behind serial blood glucose values by a mean of 18 minutes. An analysis of 2167 data pairs shows a linear relationship (r = 0.88; slope = 1.03; intercept = -0.33 mmol/L [-6 mg/dL]) between biographer readings and serial glucose measurements. The mean absolute error between the 2 measurements was 15.6% (mean error [SD], -0.07 [1.82] mmol/L [-1 {33} mg/dL]), and 96.8% of the data fell in the therapeutically relevant regions of the error grid analysis. Conclusion. These results demonstrate close agreement between GlucoWatch biographer readings and blood glucose measurements using repeated fingerstick blood samples. The automatic, frequent, and noninvasive measurements obtained with the biographer provides more information about glucose levels than the current standard of care.

CT Medical Descriptors:
*blood glucose monitoring
*hyperglycemia: DI, diagnosis
*insulin dependent diabetes mellitus
*non insulin dependent diabetes mellitus
home monitoring
personal monitor
reliability
glucose blood level
autoanalysis
human
male
female
major clinical study
clinical trial
multicenter study
controlled study
adult
article
priority journal
Drug Descriptors:
glucose: EC, endogenous compound

RN (glucose) 50-99-7, 84778-64-3
NP (1) GlucoWatch
CO (1) Cygnus (United States)

L183 ANSWER 13 OF 32 ANABSTR COPYRIGHT 2006 RSC on STN
AN 62(8):F10232 ANABSTR
TI Design of a biosensor for continual transdermal glucose monitoring.
AU **Tierney, M. J.**; Jayalakshmi, Y.; Parris, N. A.; Reidy, M. P.; Uhegbu, C.; Vijayakumar, P. (Tierney@cygn.com, Cygnus Inc., Redwood City, CA 94063, USA)
SO Clin. Chem. (Washington, D. C.) (1999) 45(9), 1681-1683

CODEN: CLCHAU ISSN: 0009-9147
(Presented at Oak Ridge Conference held in San Jose, CA, USA, 1999)
DT Journal
LA English
AB An amperometric biosensor for the determination of glucose extracted through the skin into a **hydrogel** pad is described (diagram presented). Measurements are carried out, in situ, every 20 min. Low detection limits were achieved by using a large surface area electrode and coulometric measurements. Using an in vitro cadaver skin diffusion cell, calibration graphs were linear up to 5000 mg/l of glucose. Glucose extraction and determination were stable over 12 h. The method was selective, non-toxic and accurate. The electro-osmotic extraction and biosensor system was incorporated into a small wristwatch device (GlucoWatch biographer, Cygnus Inc.).
CC *F Clinical and Biochemical Analysis (30000)
A General Analytical Chemistry
IT Analyte(s):
50-99-7, glucose
(detmn. of, biosensors for)
Concepts:
biosensors
(for glucose, transdermal, amperometric)

L183 ANSWER 14 OF 32 ANABSTR COPYRIGHT 2006 RSC on STN
AN 62(8):F10231 ANABSTR
TI Management of interferences in a transdermal, non-invasive glucose monitoring device.
AU Uhegbu, C.; Reidy, M. P.; Soni, P.; **Tierney, M. J.**; Oliva, M.; **Tamada, J.** (Chris_Uhegbu@cygn.com, Cygnus Inc., Redwood City, CA 94063, USA)
SO Clin. Chem. (Washington, D. C.) (1999) 45(9), 1679-1681
CODEN: CLCHAU ISSN: 0009-9147
(Presented at Oak Ridge Conference held in San Jose, CA, USA, 1999)
DT Journal
LA English
AB Methods used for suppressing responses from potential redox species used in the Glucowatch biographer non-invasive glucose monitoring system are described. These included use of a dual electrode system for background correction, use of low applied potentials and use of **hydrogel** formulated with phenolic additives to form permselective membrane films. The effectiveness of the **hydrogel** system was evaluated.
CC *F Clinical and Biochemical Analysis (30000)
A General Analytical Chemistry
IT Analyte(s):
50-99-7, glucose
(detmn. of, biosensors for)
Concepts:
biosensors
(for glucose, transdermal)

L183 ANSWER 15 OF 32 ANABSTR COPYRIGHT 2006 RSC on STN
AN 62(7):F10176 ANABSTR
TI Application of the mixtures of expert algorithms for signal processing in a noninvasive glucose monitoring system.
AU Kurnik, R. T.; Oliver, J. J.; Waterhouse, S. R.; Dunn, T.; Jayalakshmi, Y.; Lesho, M.; Lopatin, M.; **Tamada, J.**; Wei, C.; Potts, R. O. (kurnik@cygn.com, Cygnus, Redwood City, CA 94063, USA)
SO Sens. Actuators, B (1999) B60(1), 19-26
CODEN: SABCEB ISSN: 0925-4005
DT Journal

LA English
AB The theory of Mixtures of Experts (MOE) (Jordan and Jacobs, Neural Computation, 1994, 6, 181; Waterhouse et al., in: Touretzky (Ed.), "Bayesian methods for Mixtures of Experts, Advances in Neural Information Processing Systems", Volume 8, MIT Press, Cambridge, MA, 1996, pp. p. 351; Waterhouse, "Classification and regression using Mixtures of Experts", PhD Thesis, Cambridge University, UK, 1997) was applied to the signal from a noninvasive glucose monitor for the purpose of converting raw signal data into blood glucose values. The MOE algorithm can be described as a generalized predictive method of data analysis. This method uses a superposition of multiple linear regressions, along with a switching algorithm, to predict outcomes. Any number of input/output variables are possible. The unknown coefficients in this method are determined by an optimization technique called the Expectation Maximization (EM) algorithm. The noninvasive GlucoWatch biographer operation has been described (Kurnik et. al., J. Electrochem. Society, 1998, 145, 4119). Briefly, a small electrical current results in the transport of glucose beneath the skin to a **hydrogel** placed on the skin surface. Within the **hydrogel**, the glucose reacts with the enzyme glucose-oxidase to produce hydrogen peroxide. This hydrogen peroxide then diffuses to a platinum-based electrode, where it reacts to produce a current. The integral of this current (charge) over the sensing time is the signal used to measure extracted glucose. This process is repeated, yielding up to three measurements per hour. The data used for this analysis were obtained from diabetic subjects wearing the biographer over a 15-h period. The MOE inputs consisted of elapsed time, integrated current, blood glucose value at the calibration point, and a calibrated signal. The output was the value of blood glucose at each measurement. These training data were used to determine the unknown parameters in the MOE by the EM algorithm. Using a 3-h time point for calibrating the biographer, the mean absolute error (MAE) between the actual blood glucose and the blood glucose predicted with the MOE, was 14.4%.
CC *F Clinical and Biochemical Analysis (30000)
A General Analytical Chemistry
IT Analyte(s):
50-99-7, glucose
(detmn. of, in blood, biosensors for, mathematical models in)
Matrix:
blood
(detmn. of glucose in, biosensors for, mathematical models for)
Concepts:
biosensors
(for glucose, in blood, noninvasive, mathematical models for)
mathematical models
(mixture of expert algorithms, for signal processing from noninvasive biosensors for glucose in blood)

L183 ANSWER 16 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:276861 BIOSIS
DN PREV200000276861
TI Soft contact lenses.
AU Vanderlaan, Douglas G. [Inventor, Reprint author]; Nunez, Ivan M. [Inventor]; Hargiss, Marcie [Inventor]; Alton, Michele L. [Inventor]; **Williams, Susan** [Inventor]
CS Jacksonville, FL, USA
ASSIGNEE: Johnson and Johnson Vision Products, Inc., Jacksonville, FL, USA
PI US 5998498 19991207
SO Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 7, 1999) Vol. 1229, No. 1. e-file.

CODEN: OGUPE7. ISSN: 0098-1133.
DT Patent
LA English
ED Entered STN: 6 Jul 2000
Last Updated on STN: 7 Jan 2002
AB A soft contact lens comprising a silicone-**hydrogel** made by curing a reaction mixture comprising a silicone-containing monomer.
NCL 523107000
CC General biology - Miscellaneous 00532
IT Major Concepts
Biomedical Engineering (Allied Medical Sciences); Optometry (Allied Medical Sciences)
IT Chemicals & Biochemicals
silicone-**hydrogel**
IT Methods & Equipment
soft contact lens: prosthetic

L183 ANSWER 17 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2003-175014 [17] WPIDS
CR 2003-128144 [12]; 2003-138617 [13]
DNN N2003-137886 DNC C2003-045645
TI Production of pre-vascularized tissue useful in treatment of e.g. chronic ischemic disease, involves pre-vascularizing construct and combining tissue with construct for vascularization of tissue.
DC A96 B04 D22 P32
IN HOYING, J B; SHEPHERD, B R; **WILLIAMS, S K**
PA (ARIZ-N) ARIZONA BOARD OF REGENTS
CYC 100
PI WO 2002078439 A2 20021010 (200317)* EN 61 A01N001-02
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
AU 2002252530 A1 20021015 (200432) A01N001-02
ADT WO 2002078439 A2 WO 2002-US9605 20020329; AU 2002252530 A1 AU 2002-252530 20020329
FDT AU 2002252530 A1 Based on WO 2002078439
PRAI US 2001-279824P 20010330
IC ICM A01N001-02
ICS A61F002-02; A61F002-06; C12M001-00; C12M003-00; C12N005-06
AB WO 200278439 A UPAB: 20040520
NOVELTY - Method (M) for production of vascularized tissue involves pre-vascularizing a construct and combining a tissue with the pre-vascularized construct (I) for vascularization of the tissue.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) Method (M1) for transplanting a tissue into an animal (preferably a human) involves: combining the tissue with (I) for the vascularization of the tissue and transplanting the tissue;
(2) Method (M2) for expanding the vasculature of a tissue affected by chronic ischemic disease, myocardial infarction, peripheral vascular disease and other physical injury involves: combining (I) with the tissue (preferably a human tissue) and expanding the vasculature of the tissue;
(3) Method (M3) for producing genetically modified vascularized tissue or organ involves: genetically modifying cells with a gene of interest, combining the cells with at least one (I) and combining (I) with a tissue or organ to vascularize the tissue or organ;

(4) Method (M4) for vascularizing an engineered tissue involves: combining at least one (I) with the engineered tissue and vascularizing the engineered tissue;

(5) Method (M5) for expanding microvessel fragments into functional microvessel beds involves: isolating the microvessel fragments and combining the microvessel fragments with a three-dimensional culture to form the functional microvessel beds; and

(6) Method (M6) for re-vascularizing a tissue or organ involves: combining (I) with the tissue or organ and re-vascularizing the tissue or organ.

ACTIVITY - Vasotropic.

MECHANISM OF ACTION - Angiogenesis stimulator.

USE - For producing vascularized tissue e.g. heart tissue, lung tissue, muscle tissue, liver tissue, pancreatic tissue and lymph tissue and organ such as liver, heart, lung and other organ suitably transplantable into animals (preferably human); for transplanting a tissue in an animal; for expanding the vasculature of a tissue affected by chronic ischemic disease, myocardial infarction, other physical injury and peripheral vascular disease; for producing genetically modified vascularized tissue or organ; vascularizing an engineered tissue; for expanding microvessel fragments into functional microvessel beds; and for re-vascularizing a tissue or organ (claimed). The method is also useful for producing an implant for stimulating angiogenesis in neighboring host tissues, and a device for delivering recombinant gene products throughout the body.

ADVANTAGE - The method does not require the incorporation of genetically engineered cells to avoid premature apoptosis. (I) provide genetically engineered cells included in the tissue construct, thus have a ready access to a blood stream. The culture vessel elements themselves are amenable to genetic engineering and may act as the source of therapeutic gene product. The process successfully incorporates the desired gene into cells of patient and the therapeutic protein distributed throughout the body.

Dwg.0/9

FS CPI GMPI

FA AB; DCN

MC CPI: A12-V02; B04-C02A; B04-C02C; B04-C03B; B04-C03D; B04-F0200E; B14-F02F1; B14-L06; B14-N17B; D09-C01B; D09-C01C

L183 ANSWER 18 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2003-138617 [13] WPIDS

CR 2003-128144 [12]; 2003-175014 [17]

DNC C2003-035268

TI Production of a vascularized tissue useful for delivering a gene or its product involves combining microvessel fragment with a three-dimensional culture.

DC A96 B04 D16 D22

IN HOYING, J B; SHEPHERD, B R; **WILLIAMS, S K**

PA (HOYI-I) HOYING J B; (SHEP-I) SHEPHERD B R; (WILL-I) WILLIAMS S K

CYC 1

PI US 2002142459 A1 20021003 (200313)* 26 A61K048-00

ADT US 2002142459 A1 Provisional US 2001-279824P 20010330, CIP of US 2002-112461 20020329, US 2002-134939 20020429

PRAI US 2001-279824P 20010330; US 2002-112461 20020329; US 2002-134939 20020429

IC ICM A61K048-00
ICS C12N005-08

AB US2002142459 A UPAB: 20030312

NOVELTY - Production of a vascularized tissue involves combining at least one microvessel fragment with a three-dimensional culture to form a

prevascularized construct (p1) and then injecting into the tissue.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) Producing (M1) genetically modified vascularized tissue or organ involving:

(a) genetically modifying cells (preferably endothelial cells) with a gene;

(b) combining at least one of the cells with at least one (p1) followed by its injection into the tissue or organ; and

(c) incubating (preferably in vivo) the injected tissue or organ; and

(2) Expanding microvessel fragments into functional microvessel beds involving isolating the microvessel fragments and then injecting into a three-dimensional culture.

ACTIVITY - None given.

MECHANISM OF ACTION - Engineered tissue vascularization inducer or stimulator.

USE - For transplanting a tissue into an animal (preferably human), expanding the vasculature of the tissues e.g. heart, lung, liver. For revascularizing the tissue or organ and vascularizing an engineered tissue e.g. heart, lung, cardiac muscle, striated muscle, liver, pancreatic, cartilage, bone, pericardium, peritoneum, kidney, smooth muscle, **skin**, mucosal tissue, small intestine or large intestine, (all claimed). The vascularized tissues are used for proper tissue perfusion and health, in tissue engineering, as an implant for stimulating angiogenesis in neighboring host tissues, as means for delivering recombinant gene products throughout the body. For restructuring, repairing and/or repopulating damaged tissues or organs e.g. tissues damaged during chronic ischemic diseases, myocardial infarction, by establishing new vascular network.

ADVANTAGE - The new vasculature has all of the structural and cellular features of a viable capillary bed. The cultured vessels have potential to differentiate or change into the type of vasculature as per the tissue. The prevascularization has great potential to incorporate a vascular network within the engineered tissue and engineer it to match the tissue, thus overcome a significant hurdle of tissue engineering. The genetically engineered cells included into the tissues enable ready access of gene or its product to a blood stream or the local microenvironment inducing repair and wound healing.

Dwg.0/9

FS CPI
FA AB; DCN
MC CPI: A12-V02; B04-B04H; B04-B04L; B04-E08; B04-F01; B14-F01B; B14-F02D; D05-H08; D05-H18; D09-C01C

L183 ANSWER 19 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2003-128144 [12] WPIDS
CR 2003-138617 [13]; 2003-175014 [17]
DNC C2003-032735
TI Production of a vascularized tissue useful for delivering gene or gene product involves prevascularizing a construct and combining a tissue with the prevascularized construct.
DC A96 B04 D16 D22
IN HOYING, J B; SHEPHERD, B R; **WILLIAMS, S K**
PA (HOYI-I) HOYING J B; (SHEP-I) SHEPHERD B R; (WILL-I) WILLIAMS S K
CYC 1
PI US 2002142458 A1 20021003 (200312)* 26 A61K048-00
ADT US 2002142458 A1 Provisional US 2001-279824P 20010330, US 2002-112461 20020329
PRAI US 2001-279824P 20010330; US 2002-112461 20020329
IC ICM A61K048-00

ICS C12N005-08

AB US2002142458 A UPAB: 20030312

NOVELTY - Production of a vascularized tissue involves prevascularization of a construct and combination of a tissue with the prevascularized construct (p1).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) Producing (M1) genetically modified vascularized tissue or organ involving:

(a) genetically modifying cells (preferably endothelial cells) with a gene,

(b) combining the cells with at least one (p1) and

(c) then combining at least one (p1) with a tissue or organ for the vascularization of the tissue or organ. At least portion of the vascularization occurs in vivo; and

(2) Expanding microvessel fragments into functional microvessel beds involving isolating and combining the microvessel fragments with a three-dimensional culture for the formation of the functional microvessel beds.

ACTIVITY - None given.

MECHANISM OF ACTION - Engineered tissue vascularization inducer or stimulator.

No supporting data given.

USE - For transplanting a tissue e.g. heart, lung, muscle, liver, or other organ transplantable into an animal (preferably human). For expanding the vasculature of a tissue affected by chronic ischemic disease, myocardial infarction, peripheral vascular disease or other physical injury. For vascularizing an engineered tissue e.g. heart, lung, cardiac muscle, striated muscle, liver, pancreas, cartilage, bone, pericardium, peritoneum, kidney, smooth muscle, **skin**, mucosal tissue, small intestine or large intestine. For revascularizing a tissue or organ e.g. heart, lung, cardiac muscle, striated muscle, liver, pancreas, kidney, **skin**, brain, eye, bladder, trachea, diaphragm, ovary, fallopian tube, uterus, small intestine or large intestine (all claimed). The vascularized tissues are used for proper tissue perfusion and health, in tissue engineering, as an implant for stimulating angiogenesis in neighboring host tissues, as means for delivering recombinant gene products throughout the body. For restructuring, repairing and/or repopulating damaged tissues or organs e.g. tissues damaged during chronic ischemic diseases, myocardial infarction, by establishing new vascular network.

ADVANTAGE - The new vasculature has all of the structural and cellular features of a viable capillary bed. The culture vessels have potential to differentiate or change into the type of vasculature as per the tissue. The prevascularization has great potential to incorporate a vascular network within the engineered tissue and engineer it to match the tissue, thus overcome a significant hurdle of tissue engineering. The genetically engineered cells included into the tissue enable ready access of gene or its product to a blood stream or the local microenvironment inducing repair and wound healing.

Dwg.0/9

FS CPI

FA AB; DCN

MC CPI: A12-V02; B04-B04H; B04-B04L; B04-E08; B04-F01; B14-F01B; B14-F02D; D05-H08; D05-H14B2; D05-H18; D05-H19; D09-C01C

L183 ANSWER 20 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2002-381637 [41] WPIDS

CR 1999-570601 [48]

DNN N2002-298642 DNC C2002-107590

TI Electrode assembly for use in a transcutaneous reverse-iontophoresis

diagnostic system, comprises a substrate, bi-modal electrodes, and sensing electrodes, that are co-planar.

DC A89 B04 D16 P34 S03 S05
IN **TIERNEY, M J**
PA (TIER-I) TIERNEY M J
CYC 1
PI US 2002019604 A1 20020214 (200241)* 12 A61N001-30
ADT US 2002019604 A1 Cont of US 1996-653161 19960524, US 1999-351762 19990712
FDT US 2002019604 A1 Cont of US 5954685
PRAI US 1996-653161 19960524; US 1999-351762 19990712
IC ICM A61N001-30
AB US2002019604 A UPAB: 20020701

NOVELTY - An electrode assembly comprises:

(a) first and second bi-modal electrodes;

(b) first and second sensing electrodes; and

(c) a substrate, where the bi-modal electrodes and sensing electrodes are substantially co-planar.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for determining the concentration of an analyte in a mammalian subject using a transcutaneous reverse-iontophoresis diagnostic system, comprising:

(a) contacting a first surface of an ionically conductive **hydrogel** comprising water, electrolyte and an enzyme, with **skin** of the mammalian subject, and contacting a bi-modal electrode assembly to a second surface of the **hydrogel**;

(b) providing a current to the first bi-modal electrode for a fixed period of time, enough to effect the reverse-iontophoretic extraction of a chemical signal through the mammalian subject's **skin**, through the **hydrogel** and to the catalytic surface of the first sensing electrode;

(c) providing a potential to the first sensing electrode for a second period of time, enough to drive electrochemical conversion of chemical signal while utilizing the second bi-modal electrode as a counter electrode with respect to the first sensing electrode;

(d) measuring the electrical current generated by the electrochemical conversion at the electrode; and

(e) correlating the measured current to a concentration of chemical signal in the mammalian subject.

USE - The assembly is used for determining the concentration of an analyte in a mammalian subject (claimed). It is used in a transcutaneous reverse-iontophoresis diagnostic system useful in biomedical fields to measure concentrations of biomedically significant compounds.

ADVANTAGE - The inventive electrode assembly is easily and economically produced, and is readily connected and disconnected from a power source and monitoring device, allowing the replacement of the electrode assembly, electrode subassembly, and/or an ionically conductive material used with the electrode assembly.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic representation of the reaction which glucose oxidase catalyzes to produce gluconic acid and hydrogen peroxide, where hydrogen peroxide is then electrochemically reduced at the sensing electrode, producing two electrons in the sensing circuit.

Dwg.1/4

FS CPI EPI GMPI
FA AB; GI; DCN
MC CPI: A12-V03C2; A99-A; B04-C03B; B04-L03A; B11-C08B; B11-C08E3; B12-K04; D05-H09
EPI: S03-E03C; S03-E13B9; S03-E14H; S05-A04A; S05-C02

L183 ANSWER 21 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2000-062266 [05] WPIDS

DNN N2000-048787 DNC C2000-017210
TI Collection assemblies for continually or continuously measuring the concentration of target chemical analytes in a biological system.
DC A89 B04 D16 J04 P31 P34 S03 S05
IN CONN, T E; FORD, R; SONI, P L; **TIERNEY, M J**; VIJAYAKUMAR, P
PA (CYGN-N) CYGNUS INC
CYC 23
PI WO 9958190 A1 19991118 (200005)* EN 100 A61N001-30
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA JP KR
EP 1053043 A1 20001122 (200061) EN A61N001-30
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 6341232 B1 20020122 (200208) A61N001-30
US 2002004640 A1 20020110 (200208) A61N001-30
US 2002053637 A1 20020509 (200235) H01J049-00
JP 2002514477 W 20020521 (200236) 89 A61B005-15
US 6393318 B1 20020521 (200239) A61N001-30
EP 1053043 B1 20020724 (200256) EN A61N001-30
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 6438414 B1 20020820 (200257) A61N001-30
DE 69902229 E 20020829 (200264) A61N001-30
ES 2181433 T3 20030216 (200321) A61N001-30
CA 2329411 C 20040127 (200412) EN A61N001-30
JP 3507437 B2 20040315 (200419) 32 A61B005-15
ADT WO 9958190 A1 WO 1999-US10378 19990511; EP 1053043 A1 EP 1999-922952 19990511, WO 1999-US10378 19990511; US 6341232 B1 Provisional US 1998-85345P 19980513, Cont of US 1999-309616 19990511, US 2001-810917 20010316; US 2002004640 A1 Provisional US 1998-85345P 19980513, Cont of US 1999-309616 19990511, US 2001-810917 20010316; US 2002053637 A1 Provisional US 1998-85345P 19980513, Cont of US 1999-309616 19990511, Cont of US 2001-810917 20010316, US 2001-6625 20011130; JP 2002514477 W WO 1999-US10378 19990511, JP 2000-548038 19990511; US 6393318 B1 Provisional US 1998-85345P 19980513, US 1999-309616 19990511; EP 1053043 B1 EP 1999-922952 19990511, WO 1999-US10378 19990511; US 6438414 B1 Provisional US 1998-85345P 19980513, Cont of US 1999-309616 19990511, Cont of US 2001-810917 20010316, US 2001-6625 20011130; DE 69902229 E DE 1999-602229 19990511, EP 1999-922952 19990511, WO 1999-US10378 19990511; ES 2181433 T3 EP 1999-922952 19990511; CA 2329411 C CA 1999-2329411 19990511, WO 1999-US10378 19990511; JP 3507437 B2 WO 1999-US10378 19990511, JP 2000-548038 19990511
FDT EP 1053043 A1 Based on WO 9958190; JP 2002514477 W Based on WO 9958190; EP 1053043 B1 Based on WO 9958190; US 6438414 B1 Cont of US 6341232, Cont of US 6393318; DE 69902229 E Based on EP 1053043, Based on WO 9958190; ES 2181433 T3 Based on EP 1053043; CA 2329411 C Based on WO 9958190; JP 3507437 B2 Previous Publ. JP 200214477, Based on WO 9958190
PRAI US 1998-85345P 19980513; US 1999-309616 19990511; US 2001-810917 20010316; US 2001-6625 20011130
IC ICM A61B005-15; A61N001-30; H01J049-00
ICS A61B005-00; A61B005-05; A61B005-145; G01N027-28; G01N027-327
AB WO 9958190 A UPAB: 20021105
NOVELTY - Collection assembly, laminates and autosensor assemblies are used in **transdermal** sampling device placed in operative contact with **skin** or mucosal surface of the biological system to obtain a chemical signal associated with an analyte of interest.
DETAILED DESCRIPTION - A collection assembly for use in an iontophoretic sampling device which monitors selected analyte or its derivatives in a biological system comprises (a) a collection insert layer consisting an ionically conductive material with first and second portions, each having surfaces; (b) a mask layer consisting material that is impermeable to the selected analyte and (c) a retaining layer. The mask

layer has an inner face facing with the first surface of each collection insert and an outer face providing contact with the biological system. It defines first and second openings that are aligned with the portions of the collection insert layer. Each opening exposes a portion of the first surface of the collection layer. The mask layer has a border which extends beyond the first surface of each portion of the collection layer to provide an overhang. The retaining layer has similar features with the mask layer but where each opening exposes a portion of the second surface of the collection layer. INDEPENDENT CLAIMS are also included for (A) a laminate comprising any of the collection assemblies; (B) a sealed package containing the laminate and preferably comprising a hydrating insert; and (C) an autosensor assembly for use in the sampling device comprising (i) a collection assembly consisting constituents (a) to (c); (ii) an electrode assembly with inner and outer faces, the inner face comprising first and second bimodal electrodes that are aligned with the first and second openings in the retaining layer of the collection assembly and (iii) a support tray that contracts the outer face of the electrode assembly.

USE - Collection assemblies, laminates and autosensors are well suited for use as consumable components in the iontophoretic sampling device. The device is used to monitor selected analyte or its derivatives present in a biological system.

ADVANTAGE - The consumable components of the sampling device are manufactured and pre-assembled in an easy-to-use laminate structure that can be inserted and removed from the sampling device housing by the consumer.

DESCRIPTION OF DRAWING(S) - The figure shows an exploded view of the collection assembly and autosensor.

Collection assembly 100
Collection inserts 102
First and second opposing surfaces 104, 106
Mask layer 108
Iontophoretic electrode 109
Electrode assembly 110
Opening 112
Plow-fold liner 140
Dwg.3/9

FS CPI EPI GMPI
FA AB; GI; DCN
MC CPI: A12-L04B; A12-V03C2; B04-B04D5; B04-C03B; B04-C03D; B04-L03A; B10-A07; B11-C08C; B11-C08E3; B12-K04A; D05-H02; D05-H09; J04-B01; J04-C02
EPI: S03-E13B; S03-E14H1; S05-A04A; S05-C01

L183 ANSWER 22 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1999-570601 [48] WPIDS
CR 2002-381637 [25]
DNN N1999-420343 DNC C1999-166468
TI Electrode assembly for transcutaneous reverse-iontophoresis diagnostic system, especially for blood glucose determination.
DC B04 J04 P31 S05
IN **TIERNEY, M J**
PA (CYGN-N) CYGNUS INC
CYC 1
PI US 5954685 A 19990921 (199948)* 11 A61B001-30
ADT US 5954685 A US 1996-653161 19960524
PRAI US 1996-653161 19960524
IC ICM A61B001-30
AB US 5954685 A UPAB: 20020701
NOVELTY - Electrode assembly for use in a transcutaneous reverse-iontophoresis diagnostic system in which chemical signals are

extracted through a patient's **skin** by application of an electric field, comprising a pair of electrically connected iontophoretic electrodes (IE1 and IE2) and a sensing electrode (SE1) positioned adjacent to IE1 for detecting the chemical signal extracted by IE1, has SE1 electrically connected to IE1 such that IE1 serves as a counter electrode for SE1 and defines a first sensor electrode pair.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for determining the concentration of a chemical signal in a mammalian subject using a transcutaneous reverse-iontophoresis diagnostic system comprising a first sensor electrode pair as above, a first ionically conductive material on the **skin**-contacting side of the first sensor electrode pair, a second sensor electrode pair comprising a sensing electrode (SE2) electrically connected to IE2 such that IE2 serves as a counter electrode for SE2, and a second ionically conductive material on the **skin**-contacting side of the second sensor electrode pair, comprising contacting the first and second ionically conductive materials with the subject's **skin**, providing a current between IE1 and IE2 to extract the chemical signal through the **skin** and into the first ionically conductive material, providing a potential between SE1 and IE1 sufficient to drive an electrochemical conversion of the chemical signal in the first ionically conductive material, measuring the current generated by this electrochemical conversion, and correlating the measured current with the concentration of the chemical signal in the subject.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - The electrode assembly is especially useful for determining blood glucose levels.

ADVANTAGE - By combining the functions of iontophoretic electrode and counter electrode, the surface area of the electrode with respect to each function can be made larger. This increases the ability of the electrode to deliver the required electric field over a larger area when operating in the iontophoretic mode and increases the ability of the counter electrode to compensate for a large sensing electrode.

Dwg.0/4

FS CPI EPI GMPI
FA AB; DCN
MC CPI: B04-B04D5; B07-A02B; B11-C08D1; B12-K04A; J04-B01
EPI: S05-D01D; S05-D01G

L183 ANSWER 23 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1998-531644 [45] WPIDS
DNN N1998-414855 DNC C1998-159472
TI Electrode assembly especially for monitoring glucose in a patient - uses working electrode with physically separated planar surfaces to draw glucose in directions normal to surfaces and normal to their edges.
DC B04 D16 J04 P31
IN KURNIK, R T; **TAMADA, J**; **TIERNEY, M J**; **TAMADA, J A**; **TIERNEY, M**
PA (CYGN-N) CYGNUS INC
CYC 82
PI WO 9842252 A1 19981001 (199845)* EN 37 A61B005-00
RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9865575 A 19981020 (199909) A61B005-00
GB 2338561 A 19991222 (200002) A61B005-00
EP 1011427 A1 20000628 (200035) EN A61B005-00

R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

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|---|---|---|---|---|---|---|
| JP 2000510373 | W | 20000815 | (200044) | | 40 | A61B005-0408 |
| US 6139718 | A | 20001031 | (200057) | | | G01N027-26 |
| GB 2338561 | B | 20010808 | (200146) | | | A61B005-00 |
| KR 2001005569 | A | 20010115 | (200151) | | | A61B005-00 |
| US 6284126 | B1 | 20010904 | (200154) | | | G01N027-26 |
| CA 2283240 | C | 20030729 | (200356) | EN | | A61B005-00 |
| US 38681 | E | 20050104 | (200503) | | | G01N027-327 |
| US 38775 | E | 20050816 | (200555) | | | G01N027-327 |

ADT WO 9842252 A1 WO 1998-US5100 19980316; AU 9865575 A AU 1998-65575 19980316; GB 2338561 A WO 1998-US5100 19980316, GB 1999-22725 19990924; EP 1011427 A1 EP 1998-911672 19980316, WO 1998-US5100 19980316; JP 2000510373 W JP 1998-545762 19980316, WO 1998-US5100 19980316; US 6139718 A US 1997-824143 19970325; GB 2338561 B WO 1998-US5100 19980316, GB 1999-22725 19990924; KR 2001005569 A KR 1999-708632 19990921; US 6284126 B1 Cont of US 1997-824143 19970325, US 2000-650025 20000828; CA 2283240 C CA 1998-2283240 19980316, WO 1998-US5100 19980316; US 38681 E Cont of US 1997-824143 19970325, US 2000-650025 20000828, US 2002-308407 20021202; US 38775 E US 1997-824143 19970325, US 2002-285659 20021030

FDT AU 9865575 A Based on WO 9842252; GB 2338561 A Based on WO 9842252; EP 1011427 A1 Based on WO 9842252; JP 2000510373 W Based on WO 9842252; GB 2338561 B Based on WO 9842252; US 6284126 B1 Cont of US 6139718; CA 2283240 C Based on WO 9842252; US 38681 E Cont of US 6139718, Reissue of US 6284126; US 38775 E Reissue of US 6139718

PRAI US 1997-824143 19970325; US 2000-650025 20000828; US 2002-308407 20021202; US 2002-285659 20021030

IC ICM A61B005-00; A61B005-0408; G01N027-26; G01N027-327
ICS A61B005-05; G01N033-487

AB WO 9842252 A UPAB: 19981111

A glucose monitoring device comprises a **hydrogel** of water, electrolyte and glucose oxidase, and a working electrode (1) comprising physically separated planar surfaces (13-18). Each surface comprises a catalytic surface and is separated from adjacent surfaces by gaps (19, 20).

Also claimed is a method for measuring the amount of glucose by contacting a first surface of the **hydrogel** with the patient's **skin.** The second surface of the **hydrogel** is contacted with the working electrode. Current is applied to the working electrode in an amount to draw ions through the **skin** together with glucose.

Preferably with the illustrated working electrode construction, the glucose can diffuse via a direction normal to the electrode surface, and to a surface or edge of an electrode component in a direction parallel to the plane of the component normal to a length edge (19) and normal to a width edge (20).

USE - For detecting glucose moved through the human **skin** by electro-osmosis.

ADVANTAGE - The discontinuous working electrode obtains a signal from three dimensions which provides an improved signal to noise ratio. Accurate measurement of the glucose concentration is achieved in a short time. The electrode assembly is easily and economically produced. It is small and flat.

Dwg.3/13

FS CPI GMPI
FA AB; GI; DCN
MC CPI: B04-B04D5; B10-A07; B11-C08B; B12-K04A; D05-A01A; D05-A01B; D05-H09; J03-D01; J04-B01

L183 ANSWER 24 OF 32 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1996-068731 [07] WPIDS
DNN N1996-057792

TI Iontophoresis sampling appts for **transdermal** monitoring of target substance - has collection reservoir comprising ionically conductive **hydrogel** and ionically conductive solution, and two iontophoresis electrodes in contact with collection reservoirs in contact with subject's **skin.**

DC P31 P34 S05

IN AZIMI, N T; BHAYANI, B V; CAO, M; LEE, R K; LEUNG, L; PLANTE, P J; **TAMADA, J**; **TIERNEY, M J**; VIJAYAKUMAR, P; K-T LEE, R; LEE, R K T

PA (CYGN-N) CYGNUS THERAPEUTIC SYSTEMS; (CYGN-N) CYGNUS INC

CYC 64

PI

| | | | | | | |
|---|---|---|---|---|---|---|
| WO 9600110 | A1 | 19960104 | (199607)* | EN | 76 | A61N001-30 |
| RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG | | | | | | |
| W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN | | | | | | |
| AU 9529449 | A | 19960119 | (199616) | | | A61N001-30 |
| EP 766578 | A1 | 19970409 | (199719) | EN | 76 | A61N001-30 |
| R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE | | | | | | |
| JP 10506293 | W | 19980623 | (199835) | | 67 | A61B005-14 |
| KR 97703790 | A | 19970809 | (199836) | | | A61N001-30 |
| EP 1016433 | A1 | 20000705 | (200035) | EN | | A61N001-30 |
| R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE | | | | | | |
| EP 766578 | B1 | 20001004 | (200050) | EN | | A61N001-30 |
| R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE | | | | | | |
| DE 69519023 | E | 20001109 | (200064) | | | A61N001-30 |
| ES 2150001 | T3 | 20001116 | (200064) | | | A61N001-30 |
| JP 2002191582 | A | 20020709 | (200259) | | 25 | A61B005-145 |
| JP.3328290 | B2 | 20020924 | (200264) | | 27 | A61B005-145 |
| CA 2193885 | C | 20031125 | (200380) | EN | | A61B005-14 |

ADT WO 9600110 A1 WO 1995-US7692 19950623; AU 9529449 A AU 1995-29449 19950623; EP 766578 A1 EP 1995-925261 19950623, WO 1995-US7692 19950623; JP 10506293 W WO 1995-US7692 19950623, JP 1996-503246 19950623; KR 97703790 A WO 1995-US7692 19950623, KR 1996-707397 19961224; EP 1016433 A1 Div ex EP 1995-925261 19950623, EP 2000-200524 19950623; EP 766578 B1 EP 1995-925261 19950623, WO 1995-US7692 19950623, Related to EP 2000-200524 19950623; DE 69519023 E DE 1995-619023 19950623, EP 1995-925261 19950623, WO 1995-US7692 19950623; ES 2150001 T3 EP 1995-925261 19950623; JP 2002191582 A Div ex JP 1996-503246 19950623, JP 2001-338791 19950623; JP 3328290 B2 WO 1995-US7692 19950623, JP 1996-503246 19950623; CA 2193885 C CA 1995-2193885 19950623, WO 1995-US7692 19950623

FDT AU 9529449 A Based on WO 9600110; EP 766578 A1 Based on WO 9600110; JP 10506293 W Based on WO 9600110; KR 97703790 A Based on WO 9600110; EP 1016433 A1 Div ex EP 766578; EP 766578 B1 Related to EP 1016433, Based on WO 9600110; DE 69519023 E Based on EP 766578, Based on WO 9600110; ES 2150001 T3 Based on EP 766578; JP 3328290 B2 Previous Publ. JP 10506293, Based on WO 9600110; CA 2193885 C Based on WO 9600110

PRAI US 1995-373931 19950110; US 1994-265048 19940624

REP EP 483883; US 5036861; US 5069908; US 5279543

IC ICM A61B005-14; A61B005-145; A61N001-30
ICS A61B005-00; A61B010-00; G01N027-04; G01N027-416; G01N027-42; G01N030-88; G01N033-483; G01N033-66

AB WO 9600110 A UPAB: 19960222
The iontophoresis sampling device include a first collection reservoir comprising an ionically conductive medium (111), and a second collection reservoir comprising a second ionically conductive medium (113). Two iontophoresis electrodes (162,164) contacts the first and second conductive mediums (111,113). A sensor detects the target substance contained within at least one conductive medium (111,113).

The appts also includes a iontophoretic power source (224), and the

conductive medium is either an ionically conductive **hydrogel** or wicking material containing an ionically conductive medium. A collection reservoir includes an ionically conductive **hydrogel** having a pH in the range of between 4 and 10, and an enzyme reactive with the target substance.

USE/ADVANTAGE - Continuous in-vivo monitoring of blood glucose level of patient by reverse iontophoresis or electro-osmosis for e.g neonates, and subjects requiring frequent testing.

Dwg.41/41

FS EPI GMPI
FA AB; GI
MC EPI: S05-A04A; S05-D01G

L183 ANSWER 25 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2005:151337 USPATFULL
TITLE: Methods for measuring analyte in a subject and/or compensating for incomplete reaction involving detection of the analyte
INVENTOR(S): Parris, Norman A., Belmont, CA, UNITED STATES
Potts, Russell O., San Francisco, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
Uhegbu, Christopher, San Leandro, CA, UNITED STATES
PATENT ASSIGNEE(S): Cygnus, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2005130249 | A1 | 20050616 |
| APPLICATION INFO.: | US 2005-42865 | A1 | 20050124 (11) |

RELATED APPLN. INFO.: Division of Ser. No. US 2001-859218, filed on 14 May 2001, GRANTED, Pat. No. US 6885883

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 2000-204397P | 20000516 (60) |
| | US 2000-244078P | 20001027 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Barbara G. McClung, Cygnus Inc., Legal Department, 400 Penobscot Drive, Redwood City, CA, 94063, US
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 2904
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a predictive-kinetic method for use with data processing of a sensor-generated signal, as well as, microprocessors and monitoring systems employing such a predictive-kinetic method. Data from a transient region of a signal is used with suitable models and curve-fitting methods to predict the signal that would be measured for the system at the completion of the reaction. The values resulting from data processing of sensor response using the methods of the present invention are less sensitive to measurement variables.

L183 ANSWER 26 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2005:31741 USPATFULL

TITLE: Biosensor and methods of use thereof
INVENTOR(S): Berner, Bret, El Granada, CA, UNITED STATES
Kim, Lynn, Walnut, CA, UNITED STATES
Parris, Norman A., Belmont, CA, UNITED STATES
Potts, Russell O., San Francisco, CA, UNITED STATES
**Tamada, Janet**, Mountain View, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
PATENT ASSIGNEE(S): Cygnus, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|---|---|---|---|
| PATENT INFORMATION: | US 2005027179 | A1 | 20050203 | |
| APPLICATION INFO.: | US 2004-936095 | A1 | 20040908 | (10) |

RELATED APPLN. INFO.: Continuation of Ser. No. US 2004-778721, filed on 13 Feb 2004, GRANTED, Pat. No. US 6816742 Continuation of Ser. No. US 2003-353734, filed on 29 Jan 2003, GRANTED, Pat. No. US 6736777 Continuation of Ser. No. US 1999-267750, filed on 10 Mar 1999, GRANTED, Pat. No. US 6587705 Continuation-in-part of Ser. No. US 1998-174902, filed on 19 Oct 1998, ABANDONED

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 1998-77993P | 19980313 (60) |
| | US 1998-80591P | 19980403 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Barbara G. McClung, Cygnus Inc., Legal Department, 400 Penobscot Drive, Redwood City, CA, 94063
NUMBER OF CLAIMS: 30
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1283
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An automated system for continual transdermal extraction of analytes present in a biological system is provided. The system can be used for detecting and/or measuring the concentration of the analyte using an electrochemical biosensor detection means. The system optionally uses reverse iontophoresis to carry out the continual transdermal extraction of the analytes.

L183 ANSWER 27 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2005:204794 USPATFULL
TITLE: Electrode with improved signal to noise ratio
INVENTOR(S): Kurnik, Ronald T., Foster City, CA, UNITED STATES
**Tamada, Janet**, Stanford, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
PATENT ASSIGNEE(S): Cygnus, Inc., Redwood City, CA, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|---|---|---|---|
| PATENT INFORMATION: | US 38775 | E1 | 20050816 | |
| | US 6139718 | | 20001031 | (Original) |
| APPLICATION INFO.: | US 2002-285659 | | 20021030 | (10) |
| | US 1997-824143 | | 19970325 | (Original) |

DOCUMENT TYPE: Reissue

FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Noguerola, Alex F
LEGAL REPRESENTATIVE: McClung, Barbara G., Fabian, Gary R.
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1075
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrode assembly for sensing an electrochemical signal diffused from a source to a working electrode which is comprised of a plurality of substantially separated working electrode surfaces is disclosed. The electrode of the invention is comprised of 1) a working electrode made up of a plurality of working electrode surfaces or components and 2) a electrically insulating gap defined by adjacent edges of 1) insulating the working electrode surfaces or components from each other. The working electrode components are configured to receive electrochemical signal from two or preferably three dimensions simultaneously. The working electrode components configured over the same surface as a single electrode provide (1) an improved signal to noise ratio as compared to a single electrode by reducing noise, and (2) provide an overall enhanced signal after sensing for a given period of time.

L183 ANSWER 28 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2005:190 USPATFULL
TITLE: Electrode with improved signal to noise ratio
INVENTOR(S): Kurnik, Ronald T., Foster City, CA, United States
**Tamada, Janet**, Stanford, CA, United States
**Tierney, Michael J.**, San Jose, CA, United States
PATENT ASSIGNEE(S): Cygnus, Inc., Redwood City, CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|---|---|---|---|
| PATENT INFORMATION: | US 38681 | E1 | 20050104 | |
| | US 6284126 | | 20010904 | (Original) |
| APPLICATION INFO.: | US 2002-308407 | | 20021202 | (10) |
| | US 2000-650025 | | 20000828 | (Original) |

RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-824143, filed on 25 Mar 1997, now patented, Pat. No. US 6139718
DOCUMENT TYPE: Reissue
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Noguerola, Alex
LEGAL REPRESENTATIVE: McClung, Barbara G., Fabian, Gary R.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 12
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 997
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrode assembly for sensing an electrochemical signal diffused from a source to a working electrode which is comprised of a plurality of substantially separated working electrode surfaces is disclosed. The electrode of the invention is comprised of 1) a working electrode made up of a plurality of working electrode surfaces or components and 2) a electrically insulating gap defined by adjacent edges of 1) insulating the working electrode surfaces or components from each other. The working electrode components are configured to receive electrochemical signal from two or preferably three dimensions simultaneously. The working electrode components configured over the same surface as a single electrode provide (1) an improved signal to noise ratio as

compared to a single electrode by reducing noise, and (2) provide an overall enhanced signal after sensing for a given period of time.

L183 ANSWER 29 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2004:216274 USPATFULL
TITLE: Biosensor and methods of use thereof
INVENTOR(S): Kim, Lynn, Walnut, CA, UNITED STATES
Parris, Norman A., Belmont, CA, UNITED STATES
Potts, Russell O., San Francisco, CA, UNITED STATES
**Tamada, Janet**, Mountain View, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
Berner, Bret, El Granada, CA, UNITED STATES
PATENT ASSIGNEE(S): Cygnus, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2004167383 | A1 | 20040826 |
| | US 6816742 | B2 | 20041109 |
| APPLICATION INFO.: | US 2004-778721 | A1 | 20040213 (10) |

RELATED APPLN. INFO.: Continuation of Ser. No. US 2003-353734, filed on 29 Jan 2003, GRANTED, Pat. No. US 6736777 Continuation of Ser. No. US 1999-267750, filed on 10 Mar 1999, GRANTED, Pat. No. US 6587705 Continuation-in-part of Ser. No. US 1998-174902, filed on 19 Oct 1998, ABANDONED

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 1998-77993P | 19980313 (60) |
| | US 1998-80591P | 19980403 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Barbara G. McClung, Cygnus Inc., Intellectual Property Dept., 400 Penobscot Drive, Redwood City, CA, 94063
NUMBER OF CLAIMS: 56
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 1487
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An automated system for continual transdermal extraction of analytes present in a biological system is provided. The system can be used for detecting and/or measuring the concentration of the analyte using an electrochemical biosensor detection means. The system optionally uses reverse iontophoresis to carry out the continual transdermal extraction of the analytes.

L183 ANSWER 30 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2003:195289 USPATFULL
TITLE: Biosensor, iontophoretic sampling system, and methods of use thereof
INVENTOR(S): Kim, Lynn, Walnut, CA, UNITED STATES
Parris, Norman A., Belmont, CA, UNITED STATES
Potts, Russell O., San Francisco, CA, UNITED STATES
**Tamada, Janet**, Mountain View, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
Berner, Bret, El Granada, CA, UNITED STATES
PATENT ASSIGNEE(S): Cygnus, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2003135100 | A1 | 20030717 |
| | US 6736777 | B2 | 20040518 |
| APPLICATION INFO.: | US 2003-353734 | A1 | 20030129 (10) |

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-267750, filed on 10 Mar 1999, PENDING Continuation-in-part of Ser. No. US 1998-174902, filed on 19 Oct 1998, ABANDONED

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 1998-77993P | 19980313 (60) |
| | US 1998-80591P | 19980403 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Barbara G. McClung, Cygnus Inc., Intellectual Property Dept., 400 Penobscot Drive, Redwood City, CA, 94063
NUMBER OF CLAIMS: 56
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 1489
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An automated system for continual transdermal extraction of analytes present in a biological system is provided. The system can be used for detecting and/or measuring the concentration of the analyte using an electrochemical biosensor detection means. The system optionally uses reverse iontophoresis to carry out the continual transdermal extraction of the analytes.

L183 ANSWER 31 OF 32 USPATFULL on STN
ACCESSION NUMBER: 2002:43740 USPATFULL
TITLE: Methods for improving performance and reliability of biosensors
INVENTOR(S): Parris, Norman A., Belmont, CA, UNITED STATES
Potts, Russell O., San Francisco, CA, UNITED STATES
**Tierney, Michael J.**, San Jose, CA, UNITED STATES
Uhegbu, Christopher, San Leandro, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2002026110 | A1 | 20020228 |
| | US 6885883 | B2 | 20050426 |
| APPLICATION INFO.: | US 2001-859218 | A1 | 20010514 (9) |

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 2000-204397P | 20000516 (60) |
| | US 2000-244078P | 20001027 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CYGNUS, INC., Intellectual Property Dept., 400 Penobscot Drive, Redwood City, CA, 94063
NUMBER OF CLAIMS: 85
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 3348
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a predictive-kinetic method for use

with data processing of a sensor-generated signal, as well as, microprocessors and monitoring systems employing such a predictive-kinetic method. Data from a transient region of a signal is used with suitable models and curve-fitting methods to predict the signal that would be measured for the system at the completion of the reaction. The values resulting from data processing of sensor response using the methods of the present invention are less sensitive to measurement variables.

L183 ANSWER 32 OF 32 USPATFULL on STN
ACCESSION NUMBER: 1998:35506 USPATFULL
TITLE: Chemical signal-impermeable mask
INVENTOR(S): Kurnik, Ronald T., Foster City, CA, United States
**Tamada, Janet**, Belmont, CA, United States
**Tierney, Michael**, San Jose, CA, United States
PATENT ASSIGNEE(S): Cygnus, Inc., Redwood City, CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|---|---|---|---|
| PATENT INFORMATION: | US 5735273 | | 19980407 | |
| APPLICATION INFO.: | US 1995-527061 | | 19950912 | (8) |

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bahr, Jennifer
ASSISTANT EXAMINER: Huang, Stephen
LEGAL REPRESENTATIVE: Bozicevic, KarlBozicevic & Reed LLP
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 19
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1150
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A chemical signal-impermeable mask is positioned in the electrolyte flow such that the mask is between a source of chemical signal and a working electrode which senses the chemical signal transported from the source (e.g., by diffusion). The configuration of the mask is such that the mask prevents substantially all chemical signal transport from the chemical signal source having a radial vector component relative to a plane of the mask and the catalytic face of the working electrode, thus allowing primarily only chemical signal transport that is substantially perpendicular to the place of the mask and the catalytic surface of the working electrode. By reducing or eliminating chemical signal radial transport toward the working electrode, the mask thus significantly reduces or eliminates edge effects. By substantially reducing edge effects created by radial transport of chemical signal, it is possible to obtain a more accurate measurement of the amount (e.g., concentration) of chemical signal that is transported from a given area of source material.

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=> fil capl;  d que l26; d que l38; d que l45
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L10             1 SEA FILE=REGISTRY ABB=ON  112-38-9
L20          1426 SEA FILE=CAPLUS ABB=ON  L10
L25          6577 SEA FILE=CAPLUS ABB=ON  BIOCID?/OBI
L26             9 SEA FILE=CAPLUS ABB=ON  L25 AND L20



L10             1 SEA FILE=REGISTRY ABB=ON  112-38-9
L19             4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L20          1426 SEA FILE=CAPLUS ABB=ON  L10
L24        172352 SEA FILE=CAPLUS ABB=ON  L19
L27        162216 SEA FILE=CAPLUS ABB=ON  BACTERICID?/OBI OR FUNGICID?/OBI OR
                  MICROBICID?/OBI
L37            42 SEA FILE=CAPLUS ABB=ON  L20(L)L27
L38             2 SEA FILE=CAPLUS ABB=ON  L24 AND L37



L10             1 SEA FILE=REGISTRY ABB=ON  112-38-9
L19             4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L20          1426 SEA FILE=CAPLUS ABB=ON  L10
L24        172352 SEA FILE=CAPLUS ABB=ON  L19
L27        162216 SEA FILE=CAPLUS ABB=ON  BACTERICID?/OBI OR FUNGICID?/OBI OR
                  MICROBICID?/OBI
L44         10122 SEA FILE=CAPLUS ABB=ON  TRANSDERM?/OBI
L45             2 SEA FILE=CAPLUS ABB=ON  L20 AND L24 AND L27 AND L44


=> s (126 or 138 or 145) not 1180
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L184 12 (L26 OR L38 OR L45) NOT L180 previously printed w/ inventor search

=> d ibib ed abs hitrn 1-12

L184 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:182075 CAPLUS
DOCUMENT NUMBER: 142:266363
TITLE: Dentifrice compositions containing antimicrobial complexes synthesized by acid-base metathesis
INVENTOR(S): Stockel, Richard F.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005048005 | A1 | 20050303 | US 2003-647752 | 20030826 |

PRIORITY APPLN. INFO.: US 2003-647752 20030826
ED Entered STN: 04 Mar 2005
AB This invention relates generally to antiplaque/gingivitis mouth rinses conductive to oral hygiene, and more particularly to a mouth rinse whose formulation includes new compns. whose compns. include a metathesis or acid-base reaction of two well know anti-bacterial agents, or combinations thereof. The novel compns. of this invention can also be used in dentifrice, additive for dental floss, and antimicrobial coatings for sealing fissures, and the like, and for long term protection against caries. For example, dental floss was coated with glycerin solns. containing 5 chlorhexidine-triclosan complex, 60 PEG 3350, 30g PEG1000.
IT **112-38-9**, Undecylenic acid
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(dentifrice compns. containing antimicrobial complexes synthesized by acid-base metathesis)

L184 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1019506 CAPLUS
DOCUMENT NUMBER: 141:416148
TITLE: **Biocidal** complexes between bioactive anions and cations
INVENTOR(S): Stockel, Richard F.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004234496 | A1 | 20041125 | US 2004-770248 | 20040202 |

PRIORITY APPLN. INFO.: US 2003-445104P P 20030206
ED Entered STN: 26 Nov 2004
AB Biocidal compns. formed by metathesis of either monomeric or polymeric bioactive cations with either monomeric or polymeric bioactive anions to form water-insol. complexes. Some of these complexes can also be

synthesized by a acid-base reaction whereby the acid mol. is capable of donating a proton to the free base mol., resulting in the formation of the desired complex. These compds. or polymers are effective against a wide variety of microbial species.

IT **112-38-9D**, Undecylenic acid, complexes with bioactive cations
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**biocidal** complexes between bioactive anions and cations)

L184 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:902155 CAPLUS
DOCUMENT NUMBER: 141:384286
TITLE: Novel encochleation methods, cochleates and methods of use
INVENTOR(S): Mannino, Raphael J.; Gould-Fogerite, Susan; Krause-Elsmore, Sara L.; Delmarre, David; Lu, Ruying
PATENT ASSIGNEE(S): Biodelivery Sciences International, Inc., USA; University of Medicine and Dentistry of New Jersey
SOURCE: PCT Int. Appl., 195 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| WO 2004091578 | A2 | 20041028 | WO 2004-US11026 | | 20040409 |
| WO 2004091578 | C1 | 20050127 | | | |
| WO 2004091578 | A3 | 20050331 | | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| US 2005013854 | A1 | 20050120 | US 2004-822230 | | 20040409 |
| PRIORITY APPLN. INFO.: | | | US 2003-461483P | P | 20030409 |
| | | | US 2003-463076P | P | 20030415 |
| | | | US 2003-499247P | P | 20030828 |
| | | | US 2003-502557P | P | 20030911 |
| | | | US 2003-532755P | P | 20031224 |
| | | | US 2004-537252P | P | 20040115 |
| | | | US 2004-556192P | P | 20040324 |

ED Entered STN: 28 Oct 2004

AB The invention generally relates to cochleate drug delivery vehicles. Disclose are novel methods for making cochleates and cochleate compns. that include introducing a cargo moiety to a liposome in the presence of a solvent. Also disclosed are cochleates and cochleate compns. that include an aggregation inhibitor, and optionally, a cargo moiety. Addnl., anhydrous cochleates that include a protonized cargo moiety, a divalent metal cation and a neg. charge lipid are disclosed. Methods of using the cochleate compns. of the invention, including methods of administration, are also disclosed.

IT **112-38-9**, Undecylenic acid

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

IT **9002-89-5**, Polyvinyl alcohol **9003-01-4**, Polyacrylic acid **9003-39-8**, Polyvinylpyrrolidone **25322-68-3**, Polyethylene glycol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(novel encochleation methods and cochleates and methods of use for delivery of drugs and other agents using liposomes and aggregation inhibitors)

L184 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:633564 CAPLUS
DOCUMENT NUMBER: 139:181819
TITLE: Fatty acids as additives in nonaqueous wood preservatives containing quaternary ammonium compounds as **biocides**
INVENTOR(S): Fritschi, Joachim; Lichtenberg, Florian; Marx, Hans-Norbert
PATENT ASSIGNEE(S): Lonza A.-G., Switz.
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003066294 | A2 | 20030814 | WO 2003-EP1079 | 20030204 |
| WO 2003066294 | A3 | 20040115 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003205732 | A1 | 20030902 | AU 2003-205732 | 20030204 |
| EP 1480795 | A2 | 20041201 | EP 2003-702596 | 20030204 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2005516792 | T2 | 20050609 | JP 2003-565702 | 20030204 |
| US 2005124723 | A1 | 20050609 | US 2003-503732 | 20030204 |
| NO 2004003725 | A | 20040906 | NO 2004-3725 | 20040906 |
| PRIORITY APPLN. INFO.: | | | EP 2002-2799 A | 20020207 |
| | | | WO 2003-EP1079 W | 20030204 |

OTHER SOURCE(S): MARPAT 139:181819
ED Entered STN: 15 Aug 2003
AB The title compns., useful especially for treating dried and treated woods as they neither impair the dimension stability nor the surface quality of the wood, comprise biocidal quaternary ammonium compds. in nonpolar organic solvent to which C6-30 (cyclo)aliphatic carboxylic acids are added. The addition of carboxylic acid results in a good solubility of the quaternary ammonium compds. in nonpolar solvents. The combination of biocidal

quaternary ammonium compds. and C6-30 (cyclo)aliphatic carboxylic acids is also suitable as a preservative additive for nonpolar liqs., e.g., drilling and cutting oils, cooling lubricants, hydraulic liqs., mineral oil-based fuels and lubricants. For example, a wood preservative containing didecyldimethylammonium chloride 6.0, soya fatty acids 4.0 and white spirit 90.0 parts had fungicidal activity when applied on wood surface at 150 g/m2.

IT **112-38-9**, Undecylenic acid
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(fatty acids as additives in nonaq. wood preservatives containing quaternary ammonium compds. as **biocides**)

L184 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:112968 CAPLUS
DOCUMENT NUMBER: 138:139222
TITLE: Agents and device for removal of slime from sewer drain hole
INVENTOR(S): Maruta, Kazunari; Konishi, Yoshihiro; Takemura, Eiji; Muto, Kaori
PATENT ASSIGNEE(S): Kao Corp., Japan; Nippon Soda Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003041293 | A2 | 20030213 | JP 2001-229249 | 20010730 |

PRIORITY APPLN. INFO.: JP 2001-229249 20010730
ED Entered STN: 13 Feb 2003
AB The agents contain ε-polylysine, triclosan, diclosan, undecylenic acid, Zn undecylenate, phenoxyethanol, dimethyldimethylolhydantoin, and Zn gluconate, and are loaded in a controlled-release device which has a housing with multiple slits for dispersing the agents when water and wastes are running through it.
IT **112-38-9**, Undecylenic acid
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(agents and device for removal of slime from sewer drain hole)

L184 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:958598 CAPLUS
DOCUMENT NUMBER: 138:29132
TITLE: Stable antifungal **transdermal** patches
INVENTOR(S): Shimojo, Yasuhiko; Ono, Hidenori
PATENT ASSIGNEE(S): Yutoku Pharmaceutical Ind. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002363070 | A2 | 20021218 | JP 2001-170841 | 20010606 |

PRIORITY APPLN. INFO.: JP 2001-170841 20010606

ED Entered STN: 18 Dec 2002
AB This invention relates to patches comprising antifungal agents and solubilizing agents to inhibit precipitation of crystals. The solubilizing agents are selected from polyhydric alcs., phenols, higher alcs., ester-type surfactants, fatty acid esters, and organic acids. For example, a mixture was prepared containing bifonazole 1, Craton D 1112 (styrene-isoprene-styrene block copolymer) 26, polyisobutylene 4.6, paraffin oils 30.6, alicyclic hydrocarbons (Arkon P 100) 36.7, Irganox 1010 0.1, and thymol 1 part and applied on a PET film and laminated with a polyester fabric to give a patch.
IT **112-38-9**, Undecylenic acid **25322-68-3**, Polyethylene glycol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal **transdermal** patches containing solubilizers)

L184 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:935329 CAPLUS
DOCUMENT NUMBER: 136:49727
TITLE: Antimicrobial treatment of material likely to be infested with microbes
INVENTOR(S): Gassenmeier, Thomas Otto; Schmiedel, Peter; Speckmann, Horst-Dieter; Stelter, Norbert; Penninger, Josef
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001097610 | A1 | 20011227 | WO 2001-EP6559 | 20010609 |
| W: AU, BG, BR, BY, CA, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SI, SK, UA, US, UZ, VN, YU, ZA | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | |
| DE 10029185 | A1 | 20020103 | DE 2000-10029185 | 20000619 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10029185 A | 20000619 |

ED Entered STN: 28 Dec 2001
AB The invention relates to a method for the antimicrobial treatment of material that is likely to be infested with microbes by applying suitable biocides on or in the material to be treated. The method comprises the following steps: (a) derivatizing or encapsulating a suitable biocide in such a manner that it is activated or released upon contact with undesired microorganisms; (b) applying the derivatized or encapsulated biocide directly in or on the material to be treated, or introducing the derivatized or encapsulated biocide into a washing, cleaning or washing-up liquid or into an agent for impregnating materials that are likely to be infested with microbes. The derivatization or encapsulation is carried out in such a way as to make possible the activation of the biocide by the endo- or exoenzymes of the undesired microorganisms. Materials suitable for the above antimicrobial treatment are building materials, textiles, fur, paper, hides, leather, etc.
IT **112-38-9D**, Undecylenic acid, derivatized
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**biocide** for antimicrobial treatment of material likely to be infested with microbes)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L184 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:179656 CAPLUS
DOCUMENT NUMBER: 134:224923
TITLE: Food-grade lubricants and lubricating oils, containing polyhydroxy compounds, for conveyor chains in food processing
INVENTOR(S): Kuepper, Stefan; Schneider, Michael
PATENT ASSIGNEE(S): Henkel-Ecolab Gmbh & Co Ohg, Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 19942535 | A1 | 20010315 | DE 1999-19942535 | 19990907 |
| CA 2381345 | AA | 20010315 | CA 2000-2381345 | 20000829 |
| WO 2001018159 | A2 | 20010315 | WO 2000-EP8393 | 20000829 |
| WO 2001018159 | A3 | 20010607 | | |
| W: AU, BR, BY, CA, CN, CZ, HR, HU, ID, IN, JP, KR, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, VN, ZA | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| AU 2000072807 | A5 | 20010410 | AU 2000-72807 | 20000829 |
| BR 2000013847 | A | 20020514 | BR 2000-13847 | 20000829 |
| EP 1240281 | A2 | 20020918 | EP 2000-960539 | 20000829 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY | | | | |
| JP 2003509536 | T2 | 20030311 | JP 2001-522371 | 20000829 |
| PRIORITY APPLN. INFO.: | | | DE 1999-19942535 A | 19990907 |
| | | | WO 2000-EP8393 W | 20000829 |

ED Entered STN: 15 Mar 2001
AB Food-grade lubricants used in food processing (especially for conveyor chains and for washing and filling of polyester and polycarbonate beverage bottles) contain >20 weight% of at least one polyhydroxy compound, in which the hydroxyl groups are in free, ether, or ester forms. Suitable polyhydroxy compds. include alcs., phenols, sugar alcs., carbohydrates, polymers, alkanediols, and alkanetriols, especially glycerin, including their ether and ester derivs. The compns. can also include a fluorinated or perfluoro compound, a silicon compound, and an antimicrobial agent (especially organic peracids, ClO2, or O3).
IT **112-38-9**, Undecylenic acid
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(**biocides**; food-grade lubricants and lubricating oils, containing polyhydroxy compds., for conveyor chains in food processing)

L184 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:440957 CAPLUS
DOCUMENT NUMBER: 125:79398
TITLE: Synergistic **biocide** composition containing pyrithione plus additive
INVENTOR(S): Vinopal, Robert T.; Nelson, John D., Jr.; Glynn, Michael W.; Coughlin, Robert W.; Vieth, Robert F.;

Geiger, Jon R.
PATENT ASSIGNEE(S): University of Connecticut, USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9615666 | A1 | 19960530 | WO 1995-US14335 | 19951106 |
| W: AL, AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, UZ, VN | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 5540920 | A | 19960730 | US 1994-343802 | 19941122 |
| AU 9641025 | A1 | 19960617 | AU 1996-41025 | 19951106 |
| EP 793415 | A1 | 19970910 | EP 1995-939062 | 19951106 |
| R: DE, ES, FR, GB, IE, IT | | | | |
| CN 1171031 | A | 19980121 | CN 1995-196385 | 19951106 |
| CN 1101131 | B | 20030212 | | |
| JP 10509171 | T2 | 19980908 | JP 1995-516904 | 19951106 |
| US 5716628 | A | 19980210 | US 1996-688136 | 19960729 |
| PRIORITY APPLN. INFO.: | | | US 1994-343802 A | 19941122 |
| | | | WO 1995-US14335 W | 19951106 |

ED Entered STN: 26 Jul 1996
AB Disclosed is an antimicrobial composition characterized by synergistic antibacterial and antifungal efficacy and comprising a pyrithione salt or pyrithione acid, and at least one compound selected from benzyl and lower alkyl esters of p-hydroxybenzoic acid, salts thereof, carboxylic acids, their salts, and combinations thereof. The composition is applicable to water or an organic solvents, paints, soaps, metalworking fluids, etc.
IT **112-38-9D**, Undecylenic acid, mixts. with pyrithione or pyrithione salts
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(synergistic microbicidal composition containing)

L184 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:70306 CAPLUS
DOCUMENT NUMBER: 100:70306
TITLE: Tanning for mycostatic, antimycosic and fungicidal properties
INVENTOR(S): Roux, Joel; Grawitz, Auguste
PATENT ASSIGNEE(S): Fr.
SOURCE: Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 94329 | A1 | 19831116 | EP 1983-420083 | 19830510 |
| EP 94329 | B1 | 19860122 | | |
| R: DE, GB, IT | | | | |
| FR 2526809 | A1 | 19831118 | FR 1982-8615 | 19820512 |

| | | | | | |
|---|---|---|---|---|---|
| FR 2526809 | B1 | 19850208 | | | |
| US 4484925 | A | 19841127 | US 1983-493727 | | 19830511 |
| PRIORITY APPLN. INFO.: | | | FR 1982-8615 | A | 19820512 |

ED Entered STN: 12 May 1984

AB Conventional tanning of hides was combined with biocidal treatments. This was achieved by depositing insol., basic metal complexes (formed in situ from soluble salts) containing firmly bonded biocides. Thus, sole leather was prepared by tumbling moist hides in 6% ZnSO4 and 80% (on hide weight) water for 1 h, adding 5.80% BaSO4, tumbling 60 min, adding 0.2% Na diethyldithiocarbamate [148-18-5], and tumbling 30 min.

IT **112-38-9**
RL: USES (Uses)
(**biocide**, in tanning of hides)

L184 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:448916 CAPLUS
DOCUMENT NUMBER: 89:48916
TITLE: Composition for treating patients with fungus diseases
INVENTOR(S): Tarasov, V. P.; Rukavishnikova, V. M.; Sheklakov, N. D.; Tsetlin, V. M.; Volkova, A. P.; Gleiberman, S. E.
PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Disinfection and Sterilization, USSR; Central Scientific-Research Institute of Dermatology and Venerealogy
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1978, 55(19), 5.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| SU 607571 | T | 19780525 | SU 1976-2378441 | | 19760630 |
| PRIORITY APPLN. INFO.: | | | SU 1976-2378441 | A | 19760630 |

ED Entered STN: 12 May 1984

AB The time for treating fungus diseases was decreased by adding salicylic acid [69-72-7] 1.8-2.2, poly(vinylpyrrolidinone) [**9003-39-8**] 1.5-2.6, poly(vinyl butyral) 0.5-0.8, Et cellulose [9004-57-3] 0.3-0.6, almond essence 1.3-2.0, and a 11/12 1:1 mixture of Freons 61.0-65.5 weight% to a composition containing undecylenic acid [112-38-9] 1.5-2.2, benzoic acid [65-85-0] 1.3-1.7, and EtOH 22.4-30.8 weight%.

IT **112-38-9 9003-39-8**
RL: BIOL (Biological study)
(**fungicide** composition containing)

L184 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1975:565770 CAPLUS
DOCUMENT NUMBER: 83:165770
TITLE: Fungistatic fabric treatment
INVENTOR(S): Simonelli, Frank A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 3899616 | A | 19750812 | US 1973-414350 | 19731109 |
| PRIORITY APPLN. INFO.: | | | US 1973-414350 A | 19731109 |

ED Entered STN: 12 May 1984

AB Fabrics were given fungistatic and fungicidal protection by treating them in a normal washing method with a final rinse containing 10-undecenoic acid (I) [112-38-9] 0.125, emulsifier 0.125, and zinc silicofluoride [16871-71-9] 0.25% along with a trace of laundry perfume. The treated fabrics contained 0.05-0.1% residual I. Polyethylene glycol ethers and polysorbate 80 [9005-65-6] were used as emulsifiers.

IT **25322-68-3D**, Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, ethers
RL: USES (Uses)
(emulsifiers, in fungicidal finishing of textiles with undecenoic acid)

IT **112-38-9**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**fungicides**, for textile finishing in rinse cycle of laundering)

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=> fil capl; d que l36; d que l49
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FILE LAST UPDATED: 31 Jan 2006  (20060131/ED)

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L6          6876 SEA FILE=CAPLUS ABB=ON  HYDROGELS/CT
L10            1 SEA FILE=REGISTRY ABB=ON  112-38-9
L12            1 SEA FILE=REGISTRY ABB=ON  "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/C
                 N
L13              SEL  L12 1- RN :       1 TERM                    as crosslinker
L14         3466 SEA FILE=REGISTRY ABB=ON  L13/CRN                  in hydrogels
L16            1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17            1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                 7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L20         1426 SEA FILE=CAPLUS ABB=ON  L10
L21         8474 SEA FILE=CAPLUS ABB=ON  (L12 OR L14)
L22       167089 SEA FILE=CAPLUS ABB=ON  (L16 OR L17)
L23        22002 SEA FILE=CAPLUS ABB=ON  L18
L24       172352 SEA FILE=CAPLUS ABB=ON  L19
L30       183278 SEA FILE=CAPLUS ABB=ON  CROSSLINK?/OBI OR CROSS LINK?/OBI
L32         1277 SEA FILE=CAPLUS ABB=ON  L21 (L) L30
L33          193 SEA FILE=CAPLUS ABB=ON  L32 AND L6
L34           28 SEA FILE=CAPLUS ABB=ON  L33 AND L24
L36            6 SEA FILE=CAPLUS ABB=ON  L34 AND (L20 OR (L22 OR L23))



L12            1 SEA FILE=REGISTRY ABB=ON  "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/C
                 N
L13              SEL  L12 1- RN :       1 TERM
L14         3466 SEA FILE=REGISTRY ABB=ON  L13/CRN
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L21         8474 SEA FILE=CAPLUS ABB=ON  (L12 OR L14)
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L24       172352 SEA FILE=CAPLUS ABB=ON  L19
L30       183278 SEA FILE=CAPLUS ABB=ON  CROSSLINK?/OBI OR CROSS LINK?/OBI
L46       971902 SEA FILE=CAPLUS ABB=ON  ?RADIAT?/BI
L48           23 SEA FILE=CAPLUS ABB=ON  L46 (L) L21 (L) L30
L49            5 SEA FILE=CAPLUS ABB=ON  L48 AND L24


=> s (l36 or l49) not (l180 or l184)
L185         11 (L36 OR L49) NOT (L180 OR L184)

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previously printed

L185 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:471842 CAPLUS
DOCUMENT NUMBER: 143:13482
TITLE: Formation of shape-retentive aggregates of polymeric gel particles and their uses
INVENTOR(S): Moro, Daniel G.; St. John, John V.; Shannon, Kevin F.; Ponder, Bill C.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 45 pp., Cont.-in-part of U.S. Ser. No. 289,756.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005118270 | A1 | 20050602 | US 2004-960461 | 20041006 |
| US 2004086548 | A1 | 20040506 | US 2002-289756 | 20021106 |
| PRIORITY APPLN. INFO.: | | | US 2002-289756 | A2 20021106 |

ED Entered STN: 03 Jun 2005

AB The present invention relates to a method of forming shape-retentive aggregates of gel particles in which the aggregates are held together by non-covalent bond phys. forces such as, without limitation, hydrophobic-hydrophilic interactions and hydrogen bonds. The method comprises introducing a suspension of gel particles in a polar liquid at a selected concentration, wherein the gel particles have an absolute zeta potential, into a medium in which the absolute zeta potential of the gel particles is decreased, resulting in the gel particles coalescing into the shape-retentive aggregate. This invention also relates to uses of the method of formation of the shape-retentive aggregates of gel particles in therapy, e.g., in treatment of cancer, coronary artery disease, respiratory disease, etc. For example, shape-retentive aggregate were formed from hydrated polymer particles in vivo. Hydrogel particles were suspended in a solution of isotonic glucose at 110 mg/mL. One suspension (A) contained pure pHEMA particles while the second suspension (B) contained a mixture of 50:50 pHEMA/(95:5 pHEMA/MAA) by weight Injections that contained 100 mg of hydrated polymer were made s.c. above the dorsal fascia of mice. Animals were sacrificed at 24 h and 7 days. Both implants were present beneath the site of injection 1 and 7 days post implantation, both formed circular disks of elastic hydrogel material and showed little evidence of local irritation. The implant wts. were slightly higher than the centrifuged hydrated weight of polymer; this higher weight is likely due to the infiltration of tissue into the body of the aggregate. The implant containing a mixture of pHEMA and 95:5 pHEMA/MAA particles was more opaque than the pure pHEMA implant and showed extensive tissue infiltration after 7 days.

Implants formed in vivo using pHEMA particles dispersed in solns. of Tween 80 surfactant and dioctyl sodium sulfate (DSS) surfactant showed no evidence of irritation or erosion over 14 days.

IC ICM A61K038-18
ICS A61F013-20; A61K009-14

INCL 424485000; 514012000; 264004100

CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 37, 66

IT Aggregates
Aggregation
Cosmetics
Crosslinking agents
Gels
**Hydrogels**
Ionic strength
Particle size
Particles
Polymerization
Surfactants
Zeta potential
(formation of shape-retentive aggregates of polymeric gel particles for biomedical uses)

IT 77-77-0, Divinyl sulfone 97-90-5, Ethylene glycol dimethacrylate 102-84-1, Triallyl phosphite 109-93-3, Divinyl ether **110-26-9**, N,N'-Methylenebisacrylamide 999-21-3, Diallyl maleate 1321-74-0, Divinylbenzene, reactions 2082-81-7 2274-11-5, Ethylene glycol diacrylate 2358-84-1, Diethylene glycol dimethacrylate 2501-98-6 2767-99-9, Diallyl itaconate 2807-54-7, Diallyl fumarate 3290-92-4, Trimethylolpropane trimethacrylate 4074-88-8, Diethylene glycol diacrylate 7559-82-2, Propylene glycol dimethacrylate 13675-27-9 26028-43-3 27138-13-2, Divinyltoluene 28481-52-9 30360-21-5 32099-14-2, Diallyl malate 57472-68-1, Dipropylene glycol diacrylate 57833-54-2, Diallyl tartrate 64111-89-3, Dipropylene glycol dimethacrylate 79591-19-8 163066-33-9 852383-80-3 852383-81-4 852383-83-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(**crosslinking** agent; formation of shape-retentive aggregates of polymeric gel particles for biomedical uses)

IT **7647-14-5**, Sodium chloride, properties
RL: PRP (Properties)
(formation of shape-retentive aggregates of polymeric gel particles for biomedical uses)

IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerine, biological studies 57-55-6, Propylene glycol, biological studies 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-63-0, Isopropyl alcohol, biological studies 67-64-1, Acetone, biological studies 107-21-1, Ethylene glycol, biological studies 110-54-3, Hexane, biological studies 110-63-4, 1,4-Butanediol, biological studies 110-80-5, Ethylene glycol monoethyl ether 111-46-6, Diethylene glycol, biological studies 112-27-6, Triethylene glycol 151-21-3, Sodium dodecyl sulfate, biological studies 513-85-9, 2,3-Butanediol 542-59-6, Ethylene glycol monoacetate 629-11-8, 1,6-Hexanediol 1320-67-8, Propylene glycol monomethyl ether 2935-44-6, 2,5-Hexanediol 9005-65-6, Tween 80 25249-16-5, Poly(2-hydroxyethyl methacrylate) 25265-71-8, Dipropylene glycol **25322-68-3**, Polyethylene glycol 25395-31-7, Glyceryl diacetate 25703-79-1, Poly(2-hydroxypropyl methacrylate) 26446-35-5, Glycerol monoacetate 26999-06-4, Glycerol monobutyrate 42823-31-4 86714-13-8 540727-05-7
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formation of shape-retentive aggregates of polymeric gel particles for

biomedical uses)

L185 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:876524 CAPLUS
DOCUMENT NUMBER: 141:350885
TITLE: High-strength hydrous gel and manufacture of the gel
INVENTOR(S): Sasahara, Shuichi; Fujita, Takahiko; Yoshikawa, Kazuhiro
PATENT ASSIGNEE(S): Sekisui Plastics Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2004292592 | A2 | 20041021 | JP 2003-86110 | 20030326 |
| PRIORITY APPLN. INFO.: | | | JP 2003-86110 | 20030326 |

ED Entered STN: 22 Oct 2004
AB The gel, showing tensile break strength (S) ≥10 kPa and elongation at break (E) 350-1000%, consists of a matrix and water containing poly(vinyl alc.) (I)-type polymer supported in the matrix. The matrix is obtained by copolymn. crosslinking of monomers having 1 C:C and crosslinkable monomers having ≥2 C:C. The gel is manufactured from a uniformly dissolved mixture of the above monomers, I-type polymer, water, and a polymerization initiator by heating or irradiating for polymerization and crosslinking of the monomers. Thus, 20% acrylamide, 0.2% N,N'-methylenebisacrylamide, 45% glycerin, 5% NaCl, 3% I, and balance water were mixed, added with 0.3 part 2-hydroxycyclohexyl Ph ketone (Irgacure 184), cast on a PET film, and UV-irradiated to give a gel sheet showing S 23.7 kPa, E 475%, and sp. resistivity 1.3 kO-cm.
IC ICM C08L101-00
ICS C08L029-04
CC 37-6 (Plastics Manufacture and Processing)
IT Crosslinking
**Hydrogels**
(high-strength hydrogel made of crosslinked polymer matrix and water containing poly(vinyl alc.))
IT **7647-14-5**, Sodium chloride, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(electrolyte; in high-strength hydrogel made of crosslinked polymer matrix and water containing poly(vinyl alc.))
IT **25034-58-6P**, Acrylamide-N,N'-methylenebisacrylamide copolymer **55867-13-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(high-strength hydrogel made of **crosslinked** polymer matrix and water containing poly(vinyl alc.))
IT 7732-18-5, Water, uses **9002-89-5**, Poly(vinyl alcohol)
RL: TEM (Technical or engineered material use); USES (Uses)
(high-strength hydrogel made of crosslinked polymer matrix and water containing poly(vinyl alc.))

L185 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:718412 CAPLUS
DOCUMENT NUMBER: 141:245542
TITLE: Composite materials comprising supported porous gels

INVENTOR(S): Childs, Ronald F.; Filipe, Carlos; Ghosh, Raja; Mika, Alicja M.; Zhou, Jinsheng; Komkova, Elena N.; Kim, Marcus; Dey, Tapan K.
PATENT ASSIGNEE(S): Mcmaster University, Can.
SOURCE: PCT Int. Appl., 146 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| WO 2004073843 | A1 | 20040902 | WO 2004-CA120 | | 20040129 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI | | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| CA 2514471 | AA | 20040902 | CA 2004-2514471 | | 20040129 |
| EP 1617936 | A1 | 20060125 | EP 2004-706115 | | 20040129 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | | |
| US 2004203149 | A1 | 20041014 | US 2004-769953 | | 20040202 |
| PRIORITY APPLN. INFO.: | | | US 2003-447730P | P | 20030219 |
| | | | WO 2004-CA120 | W | 20040129 |

ED Entered STN: 02 Sep 2004

AB This invention relates to a composite material that comprises a support member that has a plurality of pores extending through the support member and, located in the pores of the support member, and filling the pores of the support member, a macroporous cross-linked gel. The invention also relates to a process for preparing the composite material described above, and to its use. The composite material is suitable, for example, for separation of substances, for example by filtration or adsorption, including chromatog., for use as a support in synthesis or for use as a support for cell growth.

IC ICM B01D067-00
ICS B01D069-10; B01D069-14; B01D069-12; B01D015-08; B01J020-32; G01N030-48

CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 9, 35, 80

IT **Hydrogels**
(neutral or charged; composite materials comprising supported porous crosslinked gels for use in sepns.)

IT **25034-58-6DP**, Acrylamide-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked** 26427-01-0P 26590-05-6DP, Acrylamide-diallyldimethylammonium chloride copolymer, UV-crosslinked **29299-74-9DP**, Diallyldimethylammonium chloride-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked** 29856-78-8DP, UV-crosslinked 31743-77-8DP, Ethylene dimethacrylate-glycidyl methacrylate copolymer, UV-crosslinked **31921-44-5DP**, Acrylamide-diallyldimethylammonium chloride-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked 70144-13-7DP**, Acrylamide-2-acrylamido-2-methyl-1-propanesulfonic acid-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked** **124924-40-9DP**, 2-Acrylamido-2-methyl-1-propanesulfonic acid-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked**

**131649-12-2DP**, UV-**crosslinked** 259743-19-6DP, UV-crosslinked **749269-08-7DP**, UV-**crosslinked** **749269-09-8DP**, UV-**crosslinked** **749269-10-1DP**, UV-**crosslinked** 749269-11-2P
RL: PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
(composite materials comprising supported porous **crosslinked** gels for use in sepns.)

IT **30421-16-0DP**, Methacrylic acid-N,N'-methylenebisacrylamide copolymer, UV-**crosslinked**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(composite materials comprising supported porous **crosslinked** gels for use in sepns.)

IT 79-06-1, Acrylamide, reactions 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions 97-90-5, Ethylene dimethacrylate 106-91-2, Glycidyl methacrylate **110-26-9**, N,N'-Methylenebisacrylamide 121-44-8, Triethylamine, reactions 814-68-6, Acryloyl chloride 924-42-5, N-(Hydroxymethyl)acrylamide 2224-15-9, Ethylene glycol diglycidyl ether 2274-11-5, Ethylene diacrylate 7398-69-8, Diallyldimethylammonium chloride 15214-89-8, 2-Acrylamido-2-methyl-1-propanesulfonic acid 15625-89-5, Trimethylolpropane triacrylate **25322-68-3**, Poly(ethylene glycol) 45021-77-0 71550-12-4, Poly(allylamine hydrochloride) 749269-13-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(composite materials comprising supported porous **crosslinked** gels for use in sepns.)

IT **9003-01-4D**, Polyacrylic acid, acid and salts, crosslinked 9005-38-3D, acid and salts, crosslinked 9080-67-5D, Poly(vinylbenzyl chloride), post-crosslinked polymers containing 25067-05-4, Poly(glycidylmethacrylate) 25087-26-7D, Poly(methacrylic acid), acid and salts, crosslinked 25189-55-3D, Poly(isopropylacrylamide), crosslinked 25232-41-1D, Poly(4-vinylpyridine), post-crosslinked polymers containing 26063-69-4D, Poly(diallylammonium chloride), post-crosslinked polymers containing 26101-52-0D, Poly(vinylsulfonic acid), acid and salts, crosslinked 26913-06-4D, Poly[imino(1,2-ethanediyl)], acid and salts, post-crosslinked copolymers 27119-07-9D, acid and salts, crosslinked 50851-57-5D, Poly(styrenesulfonic acid), acid and salts, crosslinked 104426-13-3D, post-crosslinked polymers containing **749268-99-3** 749269-00-9D, post-crosslinked polymers containing 749269-01-0D, post-crosslinked polymers containing 749269-02-1D, post-crosslinked polymers containing
RL: TEM (Technical or engineered material use); USES (Uses)
(composite materials comprising supported porous **crosslinked** gels for use in sepns.)

IT **7647-14-5**, Sodium chloride, uses
RL: MOA (Modifier or additive use); USES (Uses)
(elution modifier, affects membrane and proteins; composite materials comprising supported porous crosslinked gels for use in sepns.)

IT 9003-05-8D, Poly(acrylamide), crosslinked 9003-06-9D, Acrylamide-Acrylic acid copolymer, crosslinked **9003-39-8D**, Poly(vinylpyrrolidone), crosslinked 25085-03-4D, Acrylamide-methacrylic acid copolymer, crosslinked **25322-68-3D**, Poly(ethylene oxide), crosslinked 26590-05-6D, Acrylamide-diallyldimethylammonium chloride copolymer, crosslinked 27015-38-9D, crosslinked 28062-44-4D, Acrylic acid-N-vinylpyrrolidinone copolymer, crosslinked 28500-83-6D, crosslinked 30326-74-0D, Methacrylic acid-N-vinylpyrrolidinone copolymer, crosslinked 40623-73-2D, Acrylamide-AMPS copolymer, crosslinked 57123-13-4D, 2-Acrylamido-2-methylpropanesulfonic acid-N-vinylpyrrolidone copolymer, crosslinked 61469-23-6, Acrylamide-2-methylpropanesulfonic acid-N-isopropylacrylamide copolymer

62487-95-0D, Poly(hydroxymethyl acrylate), crosslinked 75150-29-7D, Acrylamide-3-acrylamidopropyltrimethylammonium chloride copolymer, crosslinked 151954-97-1D, N-Isopropylacrylamide-methacrylic acid copolymer, crosslinked 163530-57-2D, crosslinked
RL: TEM (Technical or engineered material use); USES (Uses)
(gel; composite materials comprising supported porous crosslinked gels for use in sepns.)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L185 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:683212 CAPLUS
DOCUMENT NUMBER: 142:374188
TITLE: Synthesis and characterization of sodium acrylate and 2-acrylamido-2-methylpropane sulphonate (AMPS) copolymer gels
AUTHOR(S): Jassal, Manjeet; Chattopadhyay, Ritwik; Ganguly, Debojyoti
CORPORATE SOURCE: Department of Textile Technology, Indian Institute of Technology, New Delhi, 110016, India
SOURCE: Fibers and Polymers (2004), 5(2), 95-104
CODEN: FPIOA6; ISSN: 1229-9197
PUBLISHER: Korean Fiber Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 23 Aug 2004
AB A series of superabsorbents based on acrylic acid (AA), sodium acrylate, 2-acrylamido-2-methylpropane sulfonic acid, N,N'-methylene bis-acrylamide (MBA) were prepared by inverse suspension polymerization These hydrogels were further crosslinked on the surface with polyethylene glycol-600 (PEG-600). The water absorbency or swelling behaviors for these xerogels in water and 0.9% saline solns., both under free condition and under load were investigated. Absorption characteristics of these hydrogels were found to depend on nature and concentration of crosslinker in the system. It was also found that the saline absorption was significantly improved as the incorporation of AMPS in the polymer was increased. The surface crosslinking introduced in the polymers was found to improve the absorption under load characteristics without lowering the free water absorption capacities of the polymer to a considerable extent.
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 38
IT **Hydrogels**
Superabsorbents
Xerogels
(preparation of sodium acrylate-acrylamidomethylpropane sulfonate copolymer gels via inverse suspension polymerization and their surface crosslinking and
superabsorbent applications)
IT **7647-14-5**, Sodium chloride, uses
RL: NUU (Other use, unclassified); USES (Uses)
(absorption of; preparation of sodium acrylate-acrylamidomethylpropane sulfonate copolymer gels via inverse suspension polymerization and their surface crosslinking and superabsorbent applications)
IT **849593-51-7P**, Acrylic acid-2-acrylamido-2-methylpropanesulfonic acid-N,N'-methylenebis[acrylamide]-polyethylene glycol copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(**crosslinked**; preparation of sodium acrylate-acrylamidomethylpropane sulfonate copolymer gels via inverse suspension polymerization and their surface **crosslinking** and superabsorbent applications)

IT **25322-68-3**, Polyethylene glycol
RL: MOA (Modifier or additive use); USES (Uses)
(for surface crosslinking; preparation of sodium acrylate-acrylamidomethylpropane sulfonate copolymer gels via inverse suspension polymerization and their surface crosslinking and superabsorbent applications)
IT **85481-56-7DP**, Acrylic acid-2-acrylamido-2-methylpropane sulfonic acid-N,N'-methylenebis[acrylamide] copolymer, neutralized
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of sodium acrylate-acrylamidomethylpropane sulfonate copolymer gels via inverse suspension polymerization and their surface **crosslinking** and superabsorbent applications)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L185 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:947957 CAPLUS
DOCUMENT NUMBER: 140:11344
TITLE: Macromolecular (hydro)gel electrodes having excellent flexibility and adhesiveness for biological uses
INVENTOR(S): Yoshikawa, Kazuhiro; Sasahara, Shuichi; Fujita, Takahiko
PATENT ASSIGNEE(S): Sekisui Plastics Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2003346554 | A2 | 20031205 | JP 2002-98899 | 20020401 |
| PRIORITY APPLN. INFO.: | | | JP 2002-76514 A | 20020319 |

ED Entered STN: 05 Dec 2003
AB The electrodes consist of crosslinked macromol. matrixes including water, electrolytes, and wetting agents which contain water-soluble polymers polymerizing ≥50% ≥3-valent alcs. and satisfying average mol. weight 150-4000 and (X + Y)/Z (X = ether number; Y = hydroxy number; Z = C number) ≥1/3. Gel electrodes comprising crosslinked nonionic polymer matrixes including water, electrolytes, and polyhydric alc.-based polymer wetting agents and satisfying prescribed adhesiveness and water retention are also claimed.
IC ICM H01B001-12
ICS A61B005-0408; A61N001-04; C08F220-20; C08F220-54; C08K003-00; C08L033-00
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38, 63
IT **Hydrogels**
Wetting agents
(cycle-resistant crosslinked hydrogel electrodes containing polyhydric alc. polymer wetting agents)
IT **7647-14-5**, Sodium chloride, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(electrolytes; cycle-resistant crosslinked hydrogel electrodes containing polyhydric alc. polymer wetting agents)
IT **125109-64-0P**, Acrylamide-N,N-dimethylacrylamide-N,N-methylenebis(acrylamide) copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(matrix; cycle-resistant **crosslinked** hydrogel electrodes containing polyhydric alc. polymer wetting agents)

IT 56-81-5, Glycerin, uses 9041-07-0, Decaglycerin **25322-68-3**, Polyethylene glycol 36675-34-0, Hexaglycerin 59113-36-9, Diglycerin
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(wetting agents; cycle-resistant crosslinked hydrogel electrodes containing polyhydric alc. polymer wetting agents)

L185 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:211458 CAPLUS
DOCUMENT NUMBER: 138:402219
TITLE: Synthesis of charged linear and crosslinked maleic diester polymers with electron-beam irradiation
AUTHOR(S): Atta, Ayman M.; Arndt, K-F.
CORPORATE SOURCE: Egyptian Petroleum Research Institute, Cairo, Egypt
SOURCE: Polymer International (2003), 52(3), 389-398
CODEN: PLYIEI; ISSN: 0959-8103
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 18 Mar 2003
AB Series of maleic mono- and diester monomers have been prepared by esterification of maleic anhydride with poly(ethylene glycol) having different mol. wts., and with n-dodecyl alc. These monomers were copolymd. with 2-acrylamido-2-methylpropane sulfonic acid (AMPS) using different dose rates of electron-beam irradiation ranging from 40 to 150 kGy. The synthesized copolymers were characterized by IR and 1H NMR anal. Their aggregation behavior and viscometric properties in aqueous solns. were investigated. The crosslinked copolymers were prepared in aqueous acidic solns.
at pH 1 or in the presence of 1% of N,N-methylene bisacrylamide (MBA) as crosslinking agent. The final equilibrium water content and swelling capacities for the prepared hydrogels were determined in aqueous solns. at pH = 1,
6.8 and 12 at 298 K. Swelling equilibrium for the prepared hydrogels were carried out in aqueous solns. of NaCl, KCl, CaCl2, Na2SO4, K2SO4 and CaSO4 at concns. ranging from 1 + 10-6 to 2 M at 298 K.
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36
IT **Hydrogels**
(synthesis of charged linear and crosslinked maleic diester polymers with electron-beam irradiation)
IT **7447-40-7**, Potassium chloride, uses **7647-14-5**, Sodium chloride, uses 7757-82-6, Sodium sulfate, uses 7778-18-9, Calcium sulfate 7778-80-5, Potassium sulfate, uses 10043-52-4, Calcium chloride, uses
RL: NUU (Other use, unclassified); USES (Uses)
(salts effect on swelling equilibrium of charged linear and crosslinked maleic diester polymers prepared with electron-beam irradiation)
IT 108-31-6, Maleic anhydride, reactions 112-53-8, Dodecyl alcohol **25322-68-3**, Polyethylene glycol
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; synthesis of charged linear and crosslinked maleic diester polymers with electron-beam irradiation)
IT 164579-00-4P 532439-75-1P 532439-76-2P **532439-77-3P** **532439-78-4P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of charged linear and **crosslinked** maleic diester

polymers with electron-beam irradiation)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L185 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:630345 CAPLUS
DOCUMENT NUMBER: 123:183548
TITLE: Recording sheets useful for ink jet recording
INVENTOR(S): Morizumi, Daigo; Tsucha, Mitsuru; Yamada, Yasushi; Yoshihara, Toshio; Sudo, Kenichiro; Oguchi, Kyoshi
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 07081211 | A2 | 19950328 | JP 1993-248609 | 19930910 |
| PRIORITY APPLN. INFO.: | | | JP 1993-248609 | 19930910 |

ED Entered STN: 22 Jun 1995
AB The recording sheets comprise a support coated with an ink-receptive layer containing a water-absorbing gel formed by crosslinking of a water-soluble polymer-based composition with ionizing radiation irradiation The sheets show good ink-drying properties and high transparency and provide clear images, thus useful for overhead projection slides. Thus, a PET film was coated with poly(acrylic acid) and irradiated with an electron beam to give a recording sheet.
IC ICM B41M005-00
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **9002-89-5**, PVA 117 **9003-01-4**, Poly(acrylic acid)
RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(ink-jet recording sheets containing radiation-crosslinked water-absorbing gels in receptor layer for overhead projection slides)
IT **110-26-9DP**, copolymer with saponified vinyl acetate copolymer acrylates **30280-72-9P**, Acrylic acid-methylenebis(acrylamide) copolymer 167781-79-5P
RL: DEV (Device component use); MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(ink-jet recording sheets containing **radiation-crosslinked** water-absorbing gels in receptor layer for overhead projection slides)

L185 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:106968 CAPLUS
DOCUMENT NUMBER: 116:106968
TITLE: Enhanced radiation crosslinking of poly(vinyl alcohol)
AUTHOR(S): Zhang, Lihua; Feng, Yeng; Li, Shuhua; Zhang, Zicheng
CORPORATE SOURCE: Changchun Inst. Appl. Chem., Acad. Sin., Changchun, 130022, Peop. Rep. China
SOURCE: Yingyong Huaxue (1991), 8(6), 65-9
CODEN: YIHUED; ISSN: 1000-0518
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 20 Mar 1992

AB Poly(vinyl alc.) was crosslinked with N,N'-methylenebisacrylamide under γ-radiation. In the low radiation-dose range, the gel fraction increased with increasing radiation dose and the enhanced radiation crosslinking was dominant. In the medium radiation-dose range, the gel fraction was almost independent of radiation dose and the degradation process counteracted the crosslinking. In the high radiation-dose range, the gel fraction decreased with increasing radiation dose and the degradation process became dominant.
CC 35-8 (Chemistry of Synthetic High Polymers)
IT **9002-89-5**, Poly(vinyl alcohol)
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking of, with methylenebisacrylamide, gamma-radiation dose effect on)
IT **110-26-9**, N,N'-Methylenebisacrylamide
RL: USES (Uses)
(**crosslinking** with, of poly(vinyl alc.), gamma-**radiation** dose effect on)

L185 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:186817 CAPLUS
DOCUMENT NUMBER: 114:186817
TITLE: Separation of water/ethanol mixture by pervaporation: relationship between the selective sorption and pervaporation
AUTHOR(S): Zhang, Yuzhong; Zhang, Keda; Xu, Jiping
CORPORATE SOURCE: Changchun Inst. Appl. Chem., Acad. Sin., Changchun, 130022, Peop. Rep. China
SOURCE: Yingyong Huaxue (1991), 8(1), 55-9
CODEN: YIHUED; ISSN: 1000-0518
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 17 May 1991
AB The swelling process of thermal-, NaOH-, and N,N'-methylenebisacrylamide radiation-crosslinked poly(vinyl alc.) membranes was studied. The pervaporation could be divided into selective sorption and selective diffusion. The contribution of these 2 parts to the pervaporation separation of water-EtOH mixture was evaluated in terms of the selective sorption factor and the selective diffusion factor, resp.
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT **9002-89-5**, Poly(vinyl alcohol)
RL: USES (Uses)
(crosslinked, membranes, for pervaporation separation of water-ethanol mixture, selective sorption and diffusion in relation to)
IT **110-26-9**
RL: USES (Uses)
(poly(vinyl alc.) membrane **radiation crosslinking** in presence of, pervaporation separation of water-ethanol mixture in relation to)

L185 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:516206 CAPLUS
DOCUMENT NUMBER: 111:116206
TITLE: Crosslinked PVA membranes for pervaporation separation of water-ethanol mixtures
AUTHOR(S): Zhang, Yuzhong; Zhang, Keda; Xu, Jiping
CORPORATE SOURCE: Changchun Inst. Appl. Chem., Acad. Sin., Changchun, Peop. Rep. China
SOURCE: Mo Kexue Yu Jishu (1988), 8(4), 8-14

CODEN: MKYJEF; ISSN: 0254-6140
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 01 Oct 1989
AB Crosslinking of poly(vinyl alc.) (I) by heat, NaOH, or radiation in presence of N,N'-methylenebisacrylamide was performed to improve the membrane performance in pervaporation separation of water-EtOH mixture The permeation rate was .apprx.800 g/m2 and the water-EtOH separation coefficient was 10 at 30° and 80% water concentration in the mixture The separation coefficient of the 3 different crosslinked membranes decreased in the following order: heat > NaOH > radiation-crosslinked I while the permeation rate was in the reverse order. The permeation activation energy of water in the mixture with EtOH was 10 kJ/mol greater than that of pure water.
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT **9002-89-5**, Poly(vinyl alcohol)
RL: USES (Uses)
(membranes, crosslinked, for pervaporation separation of ethanol-water mixture)
IT **110-26-9**, N,N'-Methylenebisacrylamide
RL: USES (Uses)
(poly(vinyl alc.) **radiation crosslinking** in presence of sodium hydroxide and, pervaporation membrane performance in separation of ethanol-water mixture in relation to)

L185 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:65439 CAPLUS
DOCUMENT NUMBER: 104:65439
TITLE: Radiation process for preparation of electrophoresis gel material
INVENTOR(S): Ebersole, Richard Calvin; Foss, Robert Paul
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: Eur. Pat. Appl., 82 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 159694 | A2 | 19851030 | EP 1985-104899 | 19850423 |
| EP 159694 | A3 | 19880120 | | |
| EP 159694 | B1 | 19920115 | | |
| R: BE, DE, FR, GB, IT, LU, NL | | | | |
| US 4704198 | A | 19871103 | US 1984-604586 | 19840427 |
| CA 1282731 | A1 | 19910409 | CA 1985-480104 | 19850425 |
| DK 8501894 | A | 19851028 | DK 1985-1894 | 19850426 |
| JP 60235819 | A2 | 19851122 | JP 1985-92160 | 19850426 |
| US 4840756 | A | 19890620 | US 1986-928154 | 19861107 |
| US 4985128 | A | 19910115 | US 1990-463899 | 19900109 |
| PRIORITY APPLN. INFO.: | | | US 1984-604586 A | 19840427 |
| | | | US 1986-928154 A3 | 19861107 |
| | | | US 1988-235399 B1 | 19880824 |

ED Entered STN: 08 Mar 1986
AB A gel product with controlled porosity is described which is useful for electrophoretic separation and is prepared without using initiators. This gel product consists of an aqueous swelled porous matrix prepared from polymerized and

crosslinked acrylamide monomers through ionized radiation. The concentration of acrylamide monomer in the solution from which gels are prepared ranges 3-30%. Thus, an aqueous solution of a mixture of acrylamide monomer and a crosslinking agent [e.g., N,N'-methylenebisacrylamide (BIS)] is adjusted to the desired pH and ionic strength with an aqueous buffer solution and injected into a mold. The mixture is subjected to ionizing radiation to polymerize and crosslink the monomer solution The dose and dose rate of ionizing radiation are regulated to control the gel porosity. The gel products thus prepared are cleaner, less expensive, and of enhanced electrophoretic properties with reduced endosmosis flow compared to conventional gels. For example, purified acrylamide and BIS were dissolved in H2O. The solution was mixed (3 parts) with aqueous SDS adjusted to pH 8.0 (1 part). The mixture was irradiated with 2 MeV electrons resulting in absorbed radiation doses of 0.03-1.0 Mrads. The resulting gels, on electrophoresis, exhibited porosities equivalent to those of conventionally prepared gels.

IC ICM G01N027-26

CC 9-7 (Biochemical Methods)

IT **110-26-9** 868-63-3 2274-11-5 28843-34-7 28961-43-5 60984-57-8
RL: ANST (Analytical study)
(as **crosslinking** agent, in **radiation**-induced polyacrylamide gel production for electrophoresis)

IT 9002-18-0 **9002-89-5** 9003-09-2 **9003-39-8** 9012-36-6 **25322-68-3**
RL: ANST (Analytical study)
(in polyacrylamide gel, for electrophoresis, radiation-induced polymerization in relation to)

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=> fil capl; d que l50; d que l52;d que l54
FILE 'CAPLUS' ENTERED AT 17:48:00 ON 01 FEB 2006
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various combinations:

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FILE COVERS 1907 - 1 Feb 2006  VOL 144 ISS 6
FILE LAST UPDATED: 31 Jan 2006  (20060131/ED)

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'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE
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hydrophilic cmpds
phosphate buffers
electrolytes
hydrogels
bisacrylamide-
transdermal

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L12           1 SEA FILE=REGISTRY ABB=ON  "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/C
                N
L13               SEL  L12 1- RN :       1 TERM
L14        3466 SEA FILE=REGISTRY ABB=ON  L13/CRN
L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                 OR  25322-68-3
L21        8474 SEA FILE=CAPLUS ABB=ON  (L12 OR L14)
L22      167089 SEA FILE=CAPLUS ABB=ON  (L16 OR L17)
L23       22002 SEA FILE=CAPLUS ABB=ON  L18
L24      172352 SEA FILE=CAPLUS ABB=ON  L19
L50           3 SEA FILE=CAPLUS ABB=ON  L21 AND L22 AND L23 AND L24
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L18 = RN's for phosphate buffers
L19 = RN's for hydrophilic cmpds
L12 & L14 = RNs for bisacrylamide crosslinker

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L6         6876 SEA FILE=CAPLUS ABB=ON  HYDROGELS/CT
L10           1 SEA FILE=REGISTRY ABB=ON  112-38-9
L12           1 SEA FILE=REGISTRY ABB=ON  "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/C
                N
L13               SEL  L12 1- RN :       1 TERM
L14        3466 SEA FILE=REGISTRY ABB=ON  L13/CRN
L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                 OR  25322-68-3
L20        1426 SEA FILE=CAPLUS ABB=ON  L10
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L21          8474 SEA FILE=CAPLUS ABB=ON  (L12 OR L14)
L22        167089 SEA FILE=CAPLUS ABB=ON  (L16 OR L17)
L23         22002 SEA FILE=CAPLUS ABB=ON  L18
L24        172352 SEA FILE=CAPLUS ABB=ON  L19
L44         10122 SEA FILE=CAPLUS ABB=ON  TRANSDERM?/OBI
L51            21 SEA FILE=CAPLUS ABB=ON  L44 AND L6 AND L24
L52             2 SEA FILE=CAPLUS ABB=ON  L51 AND (L20 OR L21 OR L22 OR L23)



L6           6876 SEA FILE=CAPLUS ABB=ON  HYDROGELS/CT
L16             1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17             1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18             4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR  7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR  7778-77-0
L19             4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                   OR  25322-68-3
L22        167089 SEA FILE=CAPLUS ABB=ON  (L16 OR L17)
L23         22002 SEA FILE=CAPLUS ABB=ON  L18
L24        172352 SEA FILE=CAPLUS ABB=ON  L19
L53           274 SEA FILE=CAPLUS ABB=ON  L24 AND L23 AND L22
L54             6 SEA FILE=CAPLUS ABB=ON  L53 AND L6


=> s (l50 or l52 or l54) not (l180 or l184 or l185)

L186            8 (L50 OR L52 OR L54) NOT (L180 OR L184 OR L185)

=> fil uspatf; d que l69; d que l71
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previously printed

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FILE 'USPATFULL' ENTERED AT 17:48:01 ON 01 FEB 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 31 Jan 2006 (20060131/PD)
FILE LAST UPDATED: 31 Jan 2006 (20060131/ED)
HIGHEST GRANTED PATENT NUMBER: US6993790
HIGHEST APPLICATION PUBLICATION NUMBER: US2006021102
CA INDEXING IS CURRENT THROUGH 31 Jan 2006 (20060131/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 31 Jan 2006 (20060131/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2005



L16             1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17             1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18             4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR  7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR  7778-77-0
L19             4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                   OR  25322-68-3
L58          1253 SEA FILE=USPATFULL ABB=ON  HYDROGELS/CT
L64         35249 SEA FILE=USPATFULL ABB=ON  L19
L65          3097 SEA FILE=USPATFULL ABB=ON  L18
L66         10159 SEA FILE=USPATFULL ABB=ON  (L16 OR L17)
L68           587 SEA FILE=USPATFULL ABB=ON  (BUFFER#(L)PHOSPHATE)/IT
L69             3 SEA FILE=USPATFULL ABB=ON  L64 AND (L68 OR L65) AND L66 AND
                  L58
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L16             1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17             1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18             4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19             4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                   OR  25322-68-3
L58          1253 SEA FILE=USPATFULL ABB=ON  HYDROGELS/CT
L61         12030 SEA FILE=USPATFULL ABB=ON  SKIN/CT
L62          3176 SEA FILE=USPATFULL ABB=ON  TRANSDERM?/IT
L64         35249 SEA FILE=USPATFULL ABB=ON  L19
L65          3097 SEA FILE=USPATFULL ABB=ON  L18
L66         10159 SEA FILE=USPATFULL ABB=ON  (L16 OR L17)
L68           587 SEA FILE=USPATFULL ABB=ON  (BUFFER#(L)PHOSPHATE)/IT
L71             7 SEA FILE=USPATFULL ABB=ON  L64 AND L58 AND (L61 OR L62) AND
                  (L65 OR L68 OR L66)


=> s (l69 or l71) not l181

L187            8 (L69 OR L71) NOT L181   previously printed

=> fil wpids; d que l86

FILE 'WPIDS' ENTERED AT 17:48:03 ON 01 FEB 2006
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FILE LAST UPDATED:          30 JAN 2006      <20060130/UP>
MOST RECENT DERWENT UPDATE:     200607        <200607/DW>
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>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
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    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
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    PLEASE CHECK:
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>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html  and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<


L75          6388 SEA FILE=WPIDS ABB=ON  HYDROGEL# OR HYDRO GEL#
L81         53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                  LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
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L82       26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                POLY ACRYLATE
L83        4949 SEA FILE=WPIDS ABB=ON  PHOSPHATE#(2A)BUFFER#
L84       10887 SEA FILE=WPIDS ABB=ON  (SODIUM OR POTASSIUM)(2A)PHOSPHATE
L85      115187 SEA FILE=WPIDS ABB=ON  ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W)
                CHLORIDE
L86          12 SEA FILE=WPIDS ABB=ON  L75 AND (L81 OR L82) AND (L83 OR L84)
                AND L85


=> s l86 not l182

L188         11 L86 NOT L182
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previously printed

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=> fil biosis; d que l106; d que l105

FILE 'BIOSIS' ENTERED AT 17:48:05 ON 01 FEB 2006
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 January 2006 (20060125/ED)


L16            1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17            1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR  7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR  7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L81        53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82        26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                POLY ACRYLATE
L87        14895 SEA FILE=BIOSIS ABB=ON  L19
L88          804 SEA FILE=BIOSIS ABB=ON  L18
L89        36410 SEA FILE=BIOSIS ABB=ON  (L16 OR L17)
L90         4868 SEA FILE=BIOSIS ABB=ON  HYDROGEL# OR HYDRO GEL#
L96        13612 SEA FILE=BIOSIS ABB=ON  PHOSPHATE#(2A)BUFFER#
L97        10457 SEA FILE=BIOSIS ABB=ON  (SODIUM OR POTASSIUM)(2A)PHOSPHATE
L98         6629 SEA FILE=BIOSIS ABB=ON  (L81 OR L82)
L99        74480 SEA FILE=BIOSIS ABB=ON  ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W
                )CHLORIDE
L102      249772 SEA FILE=BIOSIS ABB=ON  TRANSDERM? OR SKIN
L104        1028 SEA FILE=BIOSIS ABB=ON  HYDROPHILIC?(3A)POLYMER#
L106           2 SEA FILE=BIOSIS ABB=ON  (L87 OR L98 OR L104) AND (L88 OR (L96
                OR L97) OR L89 OR L99) AND L90 AND L102


L16            1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17            1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR  7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR  7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
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                OR  25322-68-3
L81        53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                 LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82        26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                 YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                 POLY ACRYLATE
L87        14895 SEA FILE=BIOSIS ABB=ON  L19
L88          804 SEA FILE=BIOSIS ABB=ON  L18
L89        36410 SEA FILE=BIOSIS ABB=ON  (L16 OR L17)
L90         4868 SEA FILE=BIOSIS ABB=ON  HYDROGEL# OR HYDRO GEL#
L96        13612 SEA FILE=BIOSIS ABB=ON  PHOSPHATE#(2A)BUFFER#
L97        10457 SEA FILE=BIOSIS ABB=ON  (SODIUM OR POTASSIUM)(2A)PHOSPHATE
L98         6629 SEA FILE=BIOSIS ABB=ON  (L81 OR L82)
L99        74480 SEA FILE=BIOSIS ABB=ON  ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W
                 )CHLORIDE
L104        1028 SEA FILE=BIOSIS ABB=ON  HYDROPHILIC?(3A)POLYMER#
L105           0 SEA FILE=BIOSIS ABB=ON  (L87 OR L98 OR L104) AND (L88 OR (L96
                 OR L97)) AND (L89 OR L99) AND L90


=> s l106 not l95

L189           2 L106 NOT L95
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previously printed

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=> fil medl; d que l152

FILE 'MEDLINE' ENTERED AT 17:48:07 ON 01 FEB 2006

 FILE LAST UPDATED: 1 FEB 2006 (20060201/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

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 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2006 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate


L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR  7558-80-7 OR
                 7558-79-4 OR  7558-80-7 OR  7758-11-4 OR  7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L81        53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                 LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82        26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                 YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                 POLY ACRYLATE
L112        5652 SEA (L81 OR L82)
L113         476 SEA L18
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L134        1106 SEA FILE=MEDLINE ABB=ON  HYDROGEL/CT
L136        6633 SEA FILE=MEDLINE ABB=ON  L19
L137        5396 SEA FILE=MEDLINE ABB=ON  (L112 OR L113)
L138        1517 SEA FILE=MEDLINE ABB=ON  POLYVINYL ALCOHOL/CT
L139        3814 SEA FILE=MEDLINE ABB=ON  POVIDONE/CT
L140       15002 SEA FILE=MEDLINE ABB=ON  BUFFERS/CT
L141       59839 SEA FILE=MEDLINE ABB=ON  PHOSPHATES+NT/CT
L142       47830 SEA FILE=MEDLINE ABB=ON  POTASSIUM CHLORIDE/CT OR SODIUM
                 CHLORIDE/CT
L149        5593 SEA FILE=MEDLINE ABB=ON  TRANSDERM?
L150          39 SEA FILE=MEDLINE ABB=ON  L149 AND (L136 OR L137 OR L138 OR
                 L139)
L152           1 SEA FILE=MEDLINE ABB=ON  L150 AND (L134 OR (L140 OR L141 OR
                 L142))


=> fil embase; d que l162; d que l165; d que l170; d que l179

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 FILE COVERS 1974 TO 26 Jan 2006 (20060126/ED)

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L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                 7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L156        4322 SEA FILE=EMBASE ABB=ON  HYDROGEL/CT
L157       19537 SEA FILE=EMBASE ABB=ON  L19
L158        2908 SEA FILE=EMBASE ABB=ON  L18
L159       59849 SEA FILE=EMBASE ABB=ON  SODIUM CHLORIDE/CT OR POTASSIUM
                 CHLORIDE/CT
L162           0 SEA FILE=EMBASE ABB=ON  L156 AND L157 AND L158 AND L159



L18            4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                 7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L157       19537 SEA FILE=EMBASE ABB=ON  L19
L158        2908 SEA FILE=EMBASE ABB=ON  L18
L159       59849 SEA FILE=EMBASE ABB=ON  SODIUM CHLORIDE/CT OR POTASSIUM
                 CHLORIDE/CT
L161        3813 SEA FILE=EMBASE ABB=ON  BLOOD GLUCOSE MONITORING/CT
L164       12772 SEA FILE=EMBASE ABB=ON  TRANSDERM?
L165           0 SEA FILE=EMBASE ABB=ON  L157 AND L158 AND L159 AND (L164 OR
                 L161)



L19            4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                  OR  25322-68-3
L156        4322 SEA FILE=EMBASE ABB=ON  HYDROGEL/CT
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L157      19537 SEA FILE=EMBASE ABB=ON  L19
L161       3813 SEA FILE=EMBASE ABB=ON  BLOOD GLUCOSE MONITORING/CT
L170          4 SEA FILE=EMBASE ABB=ON  L156 AND L157 AND L161



L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                 OR  25322-68-3
L156       4322 SEA FILE=EMBASE ABB=ON  HYDROGEL/CT
L157      19537 SEA FILE=EMBASE ABB=ON  L19
L159      59849 SEA FILE=EMBASE ABB=ON  SODIUM CHLORIDE/CT OR POTASSIUM
                 CHLORIDE/CT
L164      12772 SEA FILE=EMBASE ABB=ON  TRANSDERM?
L169         23 SEA FILE=EMBASE ABB=ON  L156 AND L157 AND L159
L172         23 SEA FILE=EMBASE ABB=ON  L156 AND L157 AND L164
L173         46 SEA FILE=EMBASE ABB=ON  L169 OR L172
L178        708 SEA FILE=EMBASE ABB=ON  TRANSDERMAL PATCH/CT
L179          5 SEA FILE=EMBASE ABB=ON  L173 AND L178


=> s (l168 or l170 or l179) not l160

L190         10 (L168 OR L170 OR L179) NOT L160

=> fil BIOTECHNO, CEABA-VTB, ANABSTR

FILE 'BIOTECHNO' ENTERED AT 17:48:09 ON 01 FEB 2006
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=> d que l121; d que l123; d que l124; d que l130

L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                 OR  25322-68-3
L81       53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                 LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82       26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                 YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                 POLY ACRYLATE
L110       2340 SEA HYDROGEL# OR HYDRO GEL#
L111       4751 SEA L19
L112       5652 SEA (L81 OR L82)
L113        476 SEA L18
L114      18090 SEA PHOSPHATE#(2A) BUFFER#
L115       5941 SEA (SODIUM OR POTASSIUM)(2A) PHOSPHATE
L116       7737 SEA (L16 OR L17)
L117      30239 SEA ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W) CHLORIDE
L120        486 SEA HYDROPHILIC?(3A) POLYMER#
L121          0 SEA L110 AND ((L111 OR L112) OR L120) AND (L113 OR L114 OR
                 L115) AND (L116 OR L117)
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previously printed

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L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                   OR  25322-68-3
L81       53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                  LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82       26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                  YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                  POLY ACRYLATE
L110       2340 SEA HYDROGEL# OR HYDRO GEL#
L111       4751 SEA L19
L112       5652 SEA (L81 OR L82)
L113        476 SEA L18
L114      18090 SEA PHOSPHATE#(2A) BUFFER#
L115       5941 SEA (SODIUM OR POTASSIUM)(2A) PHOSPHATE
L116       7737 SEA (L16 OR L17)
L117      30239 SEA ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W) CHLORIDE
L120        486 SEA HYDROPHILIC?(3A) POLYMER#
L122         13 SEA L110 AND ((L111 OR L112) OR L120) AND (L113 OR L114 OR
                  L115 OR L116 OR L117)
L123          1 SEA L122 AND (TRANSDERM? OR SKIN)



L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
                   OR  25322-68-3
L81       53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                  LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82       26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                  YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                  POLY ACRYLATE
L110       2340 SEA HYDROGEL# OR HYDRO GEL#
L111       4751 SEA L19
L112       5652 SEA (L81 OR L82)
L113        476 SEA L18
L114      18090 SEA PHOSPHATE#(2A) BUFFER#
L115       5941 SEA (SODIUM OR POTASSIUM)(2A) PHOSPHATE
L116       7737 SEA (L16 OR L17)
L117      30239 SEA ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W) CHLORIDE
L120        486 SEA HYDROPHILIC?(3A) POLYMER#
L122         13 SEA L110 AND ((L111 OR L112) OR L120) AND (L113 OR L114 OR
                  L115 OR L116 OR L117)
L124          2 SEA GLUCOSE AND L122



L10           1 SEA FILE=REGISTRY ABB=ON  112-38-9
L16           1 SEA FILE=REGISTRY ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA FILE=REGISTRY ABB=ON  SODIUM CHLORIDE/CN
L18           4 SEA FILE=REGISTRY ABB=ON  7558-79-4 OR   7558-80-7 OR
                  7558-79-4 OR  7558-80-7 OR  7758-11-4 OR   7778-77-0
L19           4 SEA FILE=REGISTRY ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8
```

```
                OR  25322-68-3
L81        53358 SEA FILE=WPIDS ABB=ON  POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRRO
                 LIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82        26141 SEA FILE=WPIDS ABB=ON  POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(P
                 YRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR
                 POLY ACRYLATE
L110        2340 SEA HYDROGEL# OR HYDRO GEL#
L111        4751 SEA L19
L112        5652 SEA (L81 OR L82)
L113         476 SEA L18
L114       18090 SEA PHOSPHATE#(2A) BUFFER#
L115        5941 SEA (SODIUM OR POTASSIUM)(2A) PHOSPHATE
L116        7737 SEA (L16 OR L17)
L117       30239 SEA ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W) CHLORIDE
L120         486 SEA HYDROPHILIC?(3A) POLYMER#
L122          13 SEA L110 AND ((L111 OR L112) OR L120) AND (L113 OR L114 OR
                 L115 OR L116 OR L117)
L127         197 SEA BISACRYLAMIDE OR (BIS(W)(ACRYLAMIDE OR ACRYL AMIDE))
L128          44 SEA UNDECYLEN?
L129          19 SEA L10
L130           1 SEA L122 AND ((L127 OR L128 OR L129))


=> s (l123 or l124 or l130) not l119
L191           4 (L123 OR L124 OR L130) NOT L119

=> => dup rem l186, l152,l189,l190,l191,l188,l187
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PROCESSING COMPLETED FOR L191
PROCESSING COMPLETED FOR L188
PROCESSING COMPLETED FOR L187
L192          39 DUP REM L186 L152 L189 L190 L191 L188 L187 (5 DUPLICATES REMOVED)
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ANSWERS '1-8' FROM FILE CAPLUS
ANSWER '9' FROM FILE MEDLINE
ANSWERS '10-11' FROM FILE BIOSIS
ANSWERS '12-21' FROM FILE EMBASE
ANSWERS '22-24' FROM FILE BIOTECHNO
ANSWER '25' FROM FILE ANABSTR
ANSWERS '26-34' FROM FILE WPIDS
ANSWERS '35-39' FROM FILE USPATFULL

=> d ibib ed abs hitind 1-8; d iall 1-24; d all 25; d iall 26-34; d ibib ab hitrn 35-39; fil hom

L192 ANSWER 1 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:614580 CAPLUS
DOCUMENT NUMBER: 143:139175
TITLE: Frequency-assisted **transdermal** agent delivery method and system
INVENTOR(S): Chan, Keith T.; Cormier, Michel J. N.; Lin, WeiQi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005153873 | A1 | 20050714 | US 2004-971441 | 20041021 |
| WO 2005069758 | A2 | 20050804 | WO 2004-US34923 | 20041021 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-535275P P 20040109
ED Entered STN: 15 Jul 2005
AB The invention discloses an apparatus and method for transdermally delivering a biol. active agent comprising a delivery system having a microprojection member (or system) that includes a plurality of microprojections (or array thereof) that are adapted to pierce through the stratum corneum into the underlying epidermis layer, or epidermis and dermis layers, a formulation containing the biol. active agent and an oscillation-inducing device. In one embodiment, the biol. active agent is contained in a biocompatible coating that is applied to the microprojection member. In a further embodiment, the delivery system includes a gel pack having an agent-containing hydrogel formulation that is disposed on the microprojection member after application to the skin of a patient. In an alternative embodiment, the biol. active agent is contained in both the coating and the hydrogel formulation.
IC ICM A61K038-16
ICS A61K031-4172; A61M031-00
INCL 514002000; 604500000; 514397000; 514171000
CC 63-6 (Pharmaceuticals)

ST frequency assisted **transdermal** agent delivery system; oscillation device **transdermal** agent delivery microprojection system

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CRM1970; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CRM197; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(E7; frequency-assisted **transdermal** agent delivery method and system)

IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgE, IgE peptide suppressors; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L1; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L2; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(M (streptococcal); frequency-assisted **transdermal** agent delivery method and system)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NF-κB (nuclear factor of κ light chain gene enhancer in B-cells), NF-κB regulatory signaling proteins; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(OMP (outer membrane protein); frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(S; frequency-assisted **transdermal** agent delivery method and system)

IT Immunostimulants
(adjuvants; frequency-assisted **transdermal** agent delivery method and system)

IT Alcohols, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkoxylated; frequency-assisted **transdermal** agent delivery method and system)
IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyl group-terminated; frequency-assisted **transdermal** agent delivery method and system)
IT Quaternary ammonium compounds, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; frequency-assisted **transdermal** agent delivery method and system)
IT Polymers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amphiphilic and hydrophilic; frequency-assisted **transdermal** agent delivery method and system)
IT Vasoconstrictors
(and pathway patency modulators; frequency-assisted **transdermal** agent delivery method and system)
IT Polymers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(block; frequency-assisted **transdermal** agent delivery method and system)
IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(capsid; frequency-assisted **transdermal** agent delivery method and system)
IT Drug delivery systems
(carriers; frequency-assisted **transdermal** agent delivery method and system)
IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cholera, B subunit; frequency-assisted **transdermal** agent delivery method and system)
IT Polysaccharides, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; frequency-assisted **transdermal** agent delivery method and system)
IT Antibodies and Immunoglobulins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments, Fab; frequency-assisted **transdermal** agent delivery method and system)
IT Anti-inflammatory agents
Anticoagulants
Antioxidants
BAC (bacterial artificial chromosome)
Bordetella pertussis
Clostridium tetani
Corynebacterium diphtheriae
Cosmids
Cytomegalovirus
Diphtheria
Eubacteria
Hepatitis
Hepatitis B virus
Hepatitis C virus
Human

Human herpesvirus 3
Human papillomavirus
Human papillomavirus 11
Human papillomavirus 16
Human papillomavirus 18
Human papillomavirus 6
**Hydrogels**
Inflammation
Influenza
Legionella pneumophila
Lyme disease
Neisseria meningitidis
Pertussis
Plasmids
Pseudomonas aeruginosa
Rabies
Rubella virus
Streptococcus group A
Streptococcus pneumoniae
Surfactants
Thrombolytics
Treponema pallidum
Vaccines
Vibrio cholerae
Virus
Viscosity
YAC (yeast artificial chromosome)
Zwitterions
(frequency-assisted **transdermal** agent delivery method and system)

IT DNA
Enkephalins
Glycoproteins
Interferons
Interleukin 10
Interleukins
Lipopolysaccharides
Lipoproteins
Neurotrophic factors
Nucleic acids
Oligonucleotides
Oligosaccharides, biological studies
Peptides, biological studies
Platelet-derived growth factors
Proteins
RNA
Tumor necrosis factors
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

IT Albumins, biological studies
Amino acids, biological studies
Heat-shock proteins
Interleukin 12
Interleukin 15
Interleukin 18
Interleukin 2
Oligodeoxyribonucleotides
Polyoxyalkylenes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

IT Neisseria meningitidis
(group B; frequency-assisted **transdermal** agent delivery method and system)

IT Antigens
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B core; frequency-assisted **transdermal** agent delivery method and system)

IT Antigens
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, S-protein; frequency-assisted **transdermal** agent delivery method and system)

IT Antigens
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, pre-S1 protein; frequency-assisted **transdermal** agent delivery method and system)

IT Antigens
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, pre-S2 protein; frequency-assisted **transdermal** agent delivery method and system)

IT Proteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis C virus surface; frequency-assisted **transdermal** agent delivery method and system)

IT Drug delivery systems
(liposomes; frequency-assisted **transdermal** agent delivery method and system)

IT Counterions
(low volatility; frequency-assisted **transdermal** agent delivery method and system)

IT Artificial chromosome
(mammalian; frequency-assisted **transdermal** agent delivery method and system)

IT Infection
(measles; frequency-assisted **transdermal** agent delivery method and system)

IT Apparatus
(oscillation-inducing device; frequency-assisted **transdermal** agent delivery method and system)

IT Osmosis
(osmotic agents; frequency-assisted **transdermal** agent delivery method and system)

IT Salivary gland, disease
(parotid, mumps; frequency-assisted **transdermal** agent delivery method and system)

IT Polyamides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids); frequency-assisted **transdermal** agent delivery method and system)

IT Hormone antagonists
(prostaglandin antagonists; frequency-assisted **transdermal** agent delivery method and system)

IT Skin

(stratum corneum, microprojection piercing; frequency-assisted **transdermal** agent delivery method and system)

IT Lipoproteins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface; frequency-assisted **transdermal** agent delivery method and system)

IT Toxoids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tetanus; frequency-assisted **transdermal** agent delivery method and system)

IT Drug delivery systems
(**transdermal**; frequency-assisted **transdermal** agent delivery method and system)

IT Acoustic devices
(ultrasonic device; frequency-assisted **transdermal** agent delivery method and system)

IT Infection
(varicella; frequency-assisted **transdermal** agent delivery method and system)

IT Infection
(variola; frequency-assisted **transdermal** agent delivery method and system)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; frequency-assisted **transdermal** agent delivery method and system)

IT Transforming growth factors
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β-; frequency-assisted **transdermal** agent delivery method and system)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β; frequency-assisted **transdermal** agent delivery method and system)

IT Interferons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ; frequency-assisted **transdermal** agent delivery method and system)

IT 9002-72-6, Somatotropin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; frequency-assisted **transdermal** agent delivery method and system)

IT 95729-65-0, NT 36
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NT 36; frequency-assisted **transdermal** agent delivery method and system)

IT 9012-72-0, Glucan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(algal; frequency-assisted **transdermal** agent delivery method and system)

IT 85637-73-6, Atrial natriuretic peptide
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(and ANP clearance inhibitors; frequency-assisted **transdermal** agent delivery method and system)

IT 83652-28-2, Calcitonin gene-related peptide
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and CSI's; frequency-assisted **transdermal** agent delivery method and system)

IT 9002-64-6, Parathyroid hormone 11000-17-2, Antidiuretic hormone
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and agonists and antagonists; frequency-assisted **transdermal** agent delivery method and system)

IT 58-82-2, Bradykinin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(and antagonists; frequency-assisted **transdermal** agent delivery method and system)

IT 11128-99-7, Angiotensin II
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; frequency-assisted **transdermal** agent delivery method and system)

IT 50-56-6, Oxytocin, biological studies 51-43-4, Epinephrine 56-59-7, Felypressin 59-42-7, Phenylephrine 84-22-0, Tetrahydrozoline 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 102-45-4, Cyclopentamine 123-82-0, Tuaminoheptane 437-38-7, Fentanyl 501-15-5, Deoxyepinephrine 526-36-3, Xylometazoline 543-82-8, Octodrine 835-31-4, Naphazoline 1082-57-1, Tramazoline 1491-59-4, Oxymetazoline 2809-21-4, Etidronic acid 3397-23-7, Ornipressin 7568-93-6, Phenylethanolamine 8001-27-2, Hirudin 9001-09-6, Chymopapain 9002-01-1, Streptokinase 9002-60-2, Corticotropin, biological studies 9002-60-2D, ACTH, analogs 9002-61-3, Chorionic gonadotropin 9002-67-9, Luteinizing hormone 9005-49-6, Dalteparin, biological studies 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9011-97-6, Cholecystokinin 9034-39-3, Growth hormone releasing factor 9034-40-6, LHRH 9034-40-6D, LHRH, analogs 9034-42-8, β-MSH 9039-53-6, Urokinase 9041-92-3, α1-Antitrypsin 10596-23-3, Clodronic acid 11096-26-7, Erythropoietin 14838-15-4, Phenylpropanolamine 16679-58-6, Desmopressin 16960-16-0, ACTH (1-24) 17692-22-7, Metizoline 24243-97-8, Tymazoline 30924-31-3, Cafaminol 33515-09-2, Gonadorelin 35121-78-9, Epoprostenol 37300-21-3, Pentosan polysulfate 37353-41-6, Cysteine protease 37571-84-9, Amidephrine 40391-99-9, Pamidronic acid 40507-78-6, Indanazoline 42794-76-3, Midodrine 43157-23-9 51110-01-1, Somatostatin 53714-56-0, Leuprolide 56030-54-7 57773-63-4, Triptorelin 57982-77-1, Buserelin 59708-52-0, Carfentanyl 60118-07-2, Endorphin 61380-40-3, Lofentanil 61489-71-2, Menotropin 62087-72-3, Pentigetide 62683-29-8, Colony-stimulating factor 65807-02-5, Goserelin 66376-36-1, Alendronic acid 67763-96-6, IGF-1 69521-94-4, Thymosin α1 71195-58-9, Alfentanyl 74812-63-8, Nordefrin 74863-84-6, Argatroban 76932-56-4, Nafarelin 83150-76-9, Octreotide 83712-60-1, Defibrotide 83869-56-1, GM-CSF 89987-06-4, Tiludronic acid 92046-97-4, α-Atrial natriuretic factor 97048-13-0, Urofollitropin 100179-39-3, C5a Peptidase 104993-28-4, Fondaparinux 105462-24-6, Risedronic acid 114084-78-5, Ibandronic acid 114471-18-0, Brain natriuretic peptide 118072-93-8, Zoledronic acid 118549-37-4, Insulinotropin 124351-85-5, Incadronic acid 127464-60-2, VEGF 128270-60-0, Hirulog 132875-61-7, Remifentanyl 139639-23-9, Tissue plasminogen activator 143003-46-7, Ceredase 143011-72-7, G-CSF 679809-58-6, Enoxaparin sodium 858360-14-2, RWJ 445167 858360-15-3, RWJ 671818
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

IT 50-81-7, Ascorbic acid, biological studies 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies 56-87-1, Lysine, biological studies 57-50-1, Sucrose, biological studies 60-00-4, EDTA, biological studies 63-68-3, Methionine, biological studies 71-00-1, Histidine, biological studies 74-79-3, Arginine, biological studies 77-86-1, Tromethamine 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, salts 80-69-3, Tartronic acid 86-01-1 87-69-4, Tartaric acid, biological studies 97-65-4, Itaconic acid, biological studies 99-14-9, Tricarballylic acid 99-20-7, Trehalose 102-71-6, Triethanolamine, biological studies 107-64-2 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-91-8, Morpholine, biological studies 110-94-1, Glutaric acid 111-42-2, Diethanolamine, biological studies 112-00-5, Dodecyltrimethyl ammonium chloride 123-03-5, Cetylpyridinium chloride 124-04-9, Adipic acid, biological studies 125-03-1, Hydrocortamate hydrochloride 134-03-2, Sodium ascorbate 141-43-5, Monoethanolamine, biological studies 141-82-2, Malonic acid, biological studies 146-91-8, Guanosine diphosphate 151-21-3, Sodium dodecyl sulfate, biological studies 151-73-5 463-79-6, Carbonic acid, biological studies 470-55-3, Stachyose 498-23-7, Citraconic acid 498-24-8, Mesaconic acid 503-49-1, Meglutol 512-69-6, Raffinose 597-12-6, Melezitose 597-44-4, Citramalic acid 994-36-5, Sodium citrate 1305-62-0, Calcium hydroxide, biological studies 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1337-30-0, Sorbitan laurate 1715-33-9, Prednisolone 21-succinate sodium salt 1997-15-5 2145-14-4, Paramethasone disodium phosphate 2375-03-3 3416-24-8, Glucosamine 5015-36-1 6000-74-4, Hydrocortisone 21-phosphate disodium salt 6284-40-8, Methylglucamine 6915-15-7, Malic acid 7440-66-6D, Zinc, -proline complex **7647-14-5**, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 7664-41-7, Ammonia, biological studies 7664-93-9, Sulfuric acid, biological studies 7784-30-7, Aluminum phosphate **9002-89-5**, Poly(vinyl alcohol 9002-92-0, Laureth-4 **9003-39-8** 9004-32-4, Sodium carboxymethyl cellulose 9004-34-6D, Cellulose, derivs. 9004-58-4, Ethylhydroxyethylcellulose 9004-62-0, Hydroxyethylcellulose 9004-64-2, Hydroxypropylcellulose 9004-65-3, Hydroxypropyl-methylcellulose 9004-67-5, Methylcellulose 9005-64-5, Tween 20 9005-65-6, Tween 80 9011-18-1, Dextran sulfate sodium 9032-42-2, Hydroxyethylmethylcellulose 9041-22-9, β-Glucan 12441-09-7D, Sorbitan, derivs. 21645-51-2, Aluminum hydroxide, biological studies 24991-23-9 25249-16-5, Poly(2-hydroxyethylmethacrylate) **25322-68-3**, Poly(ethylene oxide) 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 25702-74-3 26062-48-6, Polyhistidine 26063-13-8, Polyaspartic acid 26854-81-9, Polyhistidine 60355-78-4, Murametide 66112-59-2, Termurtide 70280-03-4 79787-27-2 83461-56-7, Mtp-pe 99011-02-6, Imiquimod 112668-45-8 121288-39-9, Loxoribine 133863-30-6, Murapalmitine 141256-04-4, QS-21 143005-30-5, ImmTher 144875-48-9, S-28463 156028-14-7, Sodium lauroamphoacetate 159940-37-1, Pleuran 467423-50-3, Theramide 497929-24-5 691397-13-4, CRL 1005 852155-91-0 852155-92-1
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

IT 9004-10-8, Insulin, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(gamma-; frequency-assisted **transdermal** agent delivery method and system)
IT 9015-94-5, Renin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; frequency-assisted **transdermal** agent delivery method and system)
IT 106021-96-9
RL: PRP (Properties)
(unclaimed sequence; frequency-assisted **transdermal** agent delivery method and system)

L192 ANSWER 2 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:467718 CAPLUS
DOCUMENT NUMBER: 141:28650
TITLE: Mannose-based fast dissolving tablets
INVENTOR(S): Fu, Yourong; Jeong, Seong Hoon; Kim, Jeanny; Callihan, Jacqueline Anne; Pai, Chaul Min; Park, Sang Yeob; Seomoon, Gun; Park, Kinam
PATENT ASSIGNEE(S): Purdue Research Foundation, USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2004047810 | A1 | 20040610 | WO 2003-US38145 | 20031125 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1569622 | A1 | 20050907 | EP 2003-796534 | 20031125 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |

PRIORITY APPLN. INFO.: US 2002-429026P P 20021125
WO 2003-US38145 W 20031125

ED Entered STN: 10 Jun 2004
AB The present invention employs mannose as a principal component in the fabrication of fast dissolving tablets. The mannose component imparts both structure-forming and fast-dissoln. properties to the tablets. Granulation of tablet components and humidification forms strong liquid bridges at the surface interfaces of mannose particles, which leads to strengthened tablets. The mannose particles, however, remain porous following compression so that contact with moisture, e.g., saliva in the mouth, leads rapidly to tablet disintegration and dissoln.
IC ICM A61K009-20
CC 63-6 (Pharmaceuticals)
IT **Hydrogels**
(superporous; mannose-based fast dissolving tablets)
IT 50-70-4, Sorbitol, biological studies 50-99-7, Dextrose, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 63-42-3,

Lactose 68-04-2, Sodium citrate 69-65-8, Mannogem EZ 69-79-4, Maltose 77-92-9, Citric acid, biological studies 87-99-0, Xylitol 99-20-7, Trehalose 100-88-9, Cyclamate 128-44-9, Sodium saccharin 144-55-8, Sodium bicarbonate, biological studies 149-32-6, Erythritol 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, biological studies 557-04-0, Magnesium stearate 585-86-4, Lactitol 585-88-6, Maltitol 866-83-1, Potassium citrate 866-84-2, Potassium citrate 994-36-5, Sodium citrate 3458-28-4, Mannose 4070-80-8, Sodium stearyl fumarate **7447-40-7**, Potassium chloride, biological studies **7558-79-4**, Sodium phosphate dibasic **7558-80-7**, Sodiumphosphate monobasic. **7647-14-5**, Sodium chloride, biological studies 7757-93-9, Dibasic calcium phosphate 7758-87-4, Tribasic calcium phosphate 7778-18-9, Calcium sulfate 7778-49-6, Potassium citrate 9002-18-0, Agar **9002-89-5**, Polyvinylalcohol **9003-39-8**, Povidone **9003-39-8D**, Polyvinylpyrrolidone, crosslinked 9004-35-7, Cellulose acetate 9004-53-9, Dextrin 9004-57-3, Ethylcellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9005-25-8, Starch, biological studies 9012-76-4, Chitosan 9032-42-2, Hydroxyethylmethyl cellulose 9050-04-8, Carboxymethylcellulose-calcium salt 9050-36-6, Maltodextrin 9063-38-1, Sodium starch glycolate 12167-74-7, Calcium hydroxide phosphate ($Ca_5(OH)(PO_4)_3$) 12619-70-4, Cyclodextrins 14807-96-6, Talc, biological studies 18641-57-1, Glyceryl behenate 18996-35-5, Sodium citrate 22839-47-0, Aspartame **25322-68-3**, Polyethylene glycol 39404-33-6, Dextrates 68424-04-4, Polydextrose 74811-65-7, Croscarmellose sodium 149202-17-5, CELLACTOSE 198828-48-7 481648-77-5, STARLAC
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mannose-based fast dissolving tablets)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L192 ANSWER 3 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:780335 CAPLUS
DOCUMENT NUMBER: 141:301507
TITLE: Ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials
INVENTOR(S): Hu, Zhenze; Salamone, Joseph C.; Jani, Dharmendra
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004186028 | A1 | 20040923 | US 2003-392743 | 20030319 |
| CA 2519222 | AA | 20041007 | CA 2004-2519222 | 20040318 |
| WO 2004084960 | A1 | 20041007 | WO 2004-US8237 | 20040318 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,

ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1603599 A1 20051214 EP 2004-757795 20040318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: US 2003-392743 A 20030319
WO 2004-US8237 W 20040318

ED Entered STN: 24 Sep 2004

AB The present invention is directed to an ophthalmic solution for soft contact lenses for controlled release of polyethers into an eye's tear film. Polyether components of the subject solution are released from the soft contact lens material matrix over long time periods to produce longer lasting wetting performance, improved lubricity, improved end-of-the-day comfort and reduced feeling of dryness from wearing contact lenses. The present invention also includes the use of cationic polyelectrolytes for controlling the swelling of hydrogel contact lenses typically caused by the absorption of high concns. of polyethers. Thus, an ophthalmic lens care multipurpose solution was prepared by mixing boric acid 0.85, monobasic sodium phosphate 0.15, dibasic sodium phosphate 0.31, sodium chloride 0.26, 30% hydroxyalkyl phosphonate 0.1, 20% polyhexamethylene biguanide 1.1 ppm, and Luviquat FC 550 (polyquaternium 10) 0.02 part.

IC ICM C11D001-00
INCL 510112000
CC 63-7 (Pharmaceuticals)

IT Antimicrobial agents
Human
**Hydrogels**
Prosthetic materials and Prosthetics
Swelling, physical
(ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

IT 77-86-1, Tromethamine 77-92-9, biological studies 102-71-6, Triethanolamine, biological studies 111-42-2, Diethanolamine, biological studies 141-43-5, Ethanolamine, biological studies **7558-79-4**, Dibasic sodium phosphate **7558-80-7**, Monobasic sodium phosphate 10043-35-3, Boric acid, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(buffers; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

IT 50-99-7, Dextrose, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 3458-28-4, Mannose **7447-40-7**, Potassium chloride, biological studies **7647-14-5**, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 10043-52-4, Calcium chloride, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tonicity adjusting agents; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

IT **9002-89-5**, Poly(vinyl alcohol) **9003-39-8**, Poly(N-vinylpyrrolidone) 9004-62-0, Hydroxyethyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(viscosity builders; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

L192 ANSWER 4 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2002:252405 CAPLUS
DOCUMENT NUMBER: 136:284445
TITLE: Self-destructing, controlled release peroral drug

delivery system
INVENTOR(S): Ritschel, Wolfgang A.; Agrawal, Mukul A.
PATENT ASSIGNEE(S): University of Cincinnati, USA
SOURCE: U.S., 34 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|---|---|---|---|---|---|
| US 6365185 | B1 | 20020402 | US 1999-277258 | | 19990326 |
| PRIORITY APPLN. INFO.: | | | US 1998-79403P | P | 19980326 |

ED Entered STN: 04 Apr 2002
AB The present invention relates to tablets which are time-controlled to release active agent at different rates in different regions of the digestive tract in order to maintain a substantially constant concentration in the blood. In one embodiment, a new modified release drug delivery system, for once a day peroral use, consists of a solid core comprising an active agent together with a hydrogel, with the solid core being coated with a semi-permeable, self-destructing membrane which is optionally drilled to provide a release orifice, and then optionally further coated with the same or different active agent material. The device delivers the active agent in a substantially constant ED for the duration of the transit through the stomach and small intestine, followed by accelerated release when reaching the large intestine. For example, a hydrogel piston pump was prepared containing a drug core and a hydrogel disk enclosed in a compression-coated shell of Et cellulose. The shell contained a delivery orifice and coated disintegrant. The coated disintegrant provided the final burst effect to overcome the physiol. decrease in absorption. An immediate release layer was included to compensate for the lag time in delivery of a model drug (promethazine) from the system. The pharmacokinetic parameters of promethazine were studied in humans in comparison with a com. available immediate release product, Phenergan. Different pharmacokinetic profiles were obtained for these two prepns. This can be attributed not to a difference in the disposition of the drug in the body, which is not expected to change, but in the difference in the absorption of the drug. In the case of the modified release delivery system of the present invention (a self-destructing, hydrogel piston pump), the absorption of the drug occurs over a much longer period of time and the drug was not completely eliminated by the time the last sample was collected. The incomplete elimination coupled with the prolonged absorption phase can result in the observed differences in the pharmacokinetic parameters.
IC ICM A61K009-24
ICS A61K009-20; A61K009-26; A61K009-22
INCL 424473000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT Binders
Human
**Hydrogels**
Pore size
Thickening agents
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
IT 50-69-1, Ribose 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid, biological studies 50-99-7, D-Glucose, biological studies

56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-81-5, Glycerin, biological studies 57-13-6, Urea, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 58-86-6, Xylose, biological studies 59-23-4, D-Galactose, biological studies 60-00-4, Edetic acid, biological studies 61-90-5, Leucine, biological studies 63-42-3, Lactose 63-68-3, Methionine, biological studies 68-04-2, Sodium citrate 69-65-8, Mannitol 69-79-4, Maltose 77-92-9, Citric acid, biological studies 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, Methacrylic acid, esters, polymers 81-07-2, Saccharin 87-99-0, Xylitol 107-41-5, Hexylene glycol 108-31-6D, Maleic anhydride, copolymers 110-44-1, Sorbic acid 127-08-2, Potassium acetate 127-09-3, Sodium acetate 128-44-9, Sodium saccharin 134-03-2, Sodium ascorbate 139-33-3, Edetate disodium 147-81-9, Arabinose 512-69-6, Raffinose 532-32-1, Sodium benzoate 546-93-0, Magnesium carbonate 556-32-1, Magnesium succinate 585-88-6, Maltitol 3458-28-4, D-Mannose 6915-15-7, Malic acid **7447-40-7**, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies **7558-79-4 7647-14-5**, Sodium chloride, biological studies 7704-73-6, Sodium fumarate **7758-11-4** 7786-30-3, Magnesium chloride, biological studies 9002-18-0D, Agar, crosslinked **9002-89-5**, Poly(vinyl alcohol) **9003-01-4**, Polyacrylic acid **9003-01-4D**, Polyacrylic acid, salts 9003-05-8, Polyacrylamide 9003-09-2, Poly(vinyl methyl ether) **9003-39-8**, Poly(vinylpyrrolidone) 9004-32-4, Carboxymethyl cellulose 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, ethers 9004-35-7, Cellulose acetate 9004-38-0, Cellulose acetate phthalate 9004-39-1, Cellulose acetate propionate 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-63-1, Hydroxyethyl cellulose acetate 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9005-25-8D, Starch, graft copolymers 9005-32-7, Alginic acid 9005-38-3, Sodium alginate 9006-26-2, Ethylene-maleic anhydride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-13-6, Maleic anhydride-styrene copolymer 9012-09-3, Cellulose triacetate 9012-72-0D, Polyglucan, diester crosslinked 9032-35-3, Cellulose acetate succinate 9040-62-4, Amylose triacetate 9041-69-4, Cellulose acetate p-toluene sulfonate 14066-20-7, Dihydrogen phosphate, biological studies 24937-78-8D, hydroxylated 25086-15-1, Methacrylic acid-methyl methacrylate copolymer **25322-68-3**, Polyethylene glycol 25722-45-6, Maleic anhydride-propylene copolymer 26009-03-0, Poly(glycolic acid), SRU 26124-68-5, Poly(glycolic acid) 26426-80-2, Isobutylene-maleic anhydride copolymer 28476-72-4, Indene-maleic anhydride polymer 33434-24-1, Ethyl acrylate-methyl methacrylate-trimethylammonioethyl methacrylate chloride copolymer 61944-28-3, Butene-maleic anhydride copolymer 63340-54-5, β-Glucan triacetate 66828-18-0, Dextrate 97089-04-8, Cellulose acetate ethyl carbamate 97089-05-9, Cellulose acetate methyl carbamate 110540-08-4, Cellulose acetate laurate 118440-35-0, Agar acetate 118440-59-8, Cellulose acetate ethyl carbonate 118440-61-2, Cellulose acetate methyl sulfonate 118441-60-4, Cellulose acetate dimethylaminoacetate 118441-64-8, Locust bean gum triacetate 172825-35-3, Cellulose acetate butyl sulfonate 288156-15-0, D-Glucan acetate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L192 ANSWER 5 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:731261 CAPLUS
DOCUMENT NUMBER: 143:185829
TITLE: Calibration and storage of pH electrodes using hydrogels
PATENT ASSIGNEE(S): Hamilton Bonaduz AG, Switz.
SOURCE: Ger. Gebrauchsmusterschrift, 6 pp.
CODEN: GGXXFR
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 202004002433 | U1 | 20050811 | DE 2004-202004002433 | 20040217 |
| EP 1564549 | A1 | 20050817 | EP 2005-3338 | 20050216 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU

PRIORITY APPLN. INFO.: DE 2004-202004002433U 20040217
ED Entered STN: 12 Aug 2005
AB Hydrogels are used for the calibration and storage of pH electrodes which are based on cross-linked polyacrylamide. The hydrogel contains 2-10 weight% acrylamide and 1-10 weight% N,N'-methylenebisacrylamide as a crosslinking agent. The hydrogel contains buffer solns. with pH values of 2-12. The hydrogel contains partially water and 10-80 volume% of a wetting agent, such as glycerin, ethylene glycol, or propylene glycol.
IC ICM G01N027-28
ICS G01N027-333; G01N027-38
CC 79-7 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72
IT 144-55-8, Sodium bicarbonate, uses 497-19-8, Sodium carbonate, uses 1310-73-2, Sodium hydroxide, uses 1330-43-4, Sodium borate 5949-29-1, Citric acid monohydrate **7558-79-4**, Disodium phosphate **7778-77-0**, Monopotassium phosphate
RL: NUU (Other use, unclassified); USES (Uses)
(buffer; calibration and storage of pH electrodes using hydrogels)
IT **7447-40-7**, Potassium chloride, uses 9000-69-5, Pectin **9002-89-5 9003-39-8**, Polyvinylpyrrolidone 9004-34-6D, Cellulose, hydroxulated derivs. 9004-54-0, Dextran, uses 26628-22-8, Sodium azide
RL: NUU (Other use, unclassified); USES (Uses)
(calibration and storage of pH electrodes using hydrogels)
IT 79-06-1, Acrylamide, reactions **110-26-9**, Bisacrylamide
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(polymerization; calibration and storage of pH electrodes using hydrogels)

L192 ANSWER 6 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1294275 CAPLUS
DOCUMENT NUMBER: 144:50888
TITLE: Manufacture of composite agent for crop cultivation in dry land
INVENTOR(S): Wang, Shuyu
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| CN 1580010 | A | 20050216 | CN 2004-10013758 | 20040519 |
| PRIORITY APPLN. INFO.: | | | CN 2004-10013758 | 20040519 |

ED Entered STN: 12 Dec 2005

AB The title agent is composed of (by weight%): AU-type water absorber 0-65, urea 3-20, potassium dihydrogen phosphate 3-20, diammonium hydrogen phosphate 0-20, calcium nitrate 0-1.5, magnesium sulfate 0-1.5, ammonium molybdate 0.01-0.08, zinc sulfate 0-0.8, manganese sulfate 0.2-1.0, boric acid or borax 0.6-3.0, ferrous sulfate 0.2-1.0, potassium fulvate 0-2.5, disodium ethylene diamine tetraacetate 0-5.0, fatty alc. polyoxyethylene ether 0-0.4, 6-benzylaminopurine 0-0.04, triacontanol 0-0.10, potassium naphthyl acetate 0-0.10, indolebutyric acid 0-0.01, gibberellin 0-0.05, sodium pentachlorophenol 0-0.6, potassium sorbate 0-0.06, triazolone 0-1.5, tebuconazole 0-1.2, thiram 0-0.6, carbendazim 0-1.4, avermectin 0-5.0, acid scarlet 0-0.8, humic acid 0-1.0, copper sulfate 0-0.5, potassium permanganate 0-0.8, potassium chloride 0-10, polyethylene glycol 0-2.0, and bentonite or water balance. This agent has pesticidal, bactericidal, and fertilizing effects, and has the advantages of no toxicity, no environment pollution, and low cost.

IC ICM C05G003-00
ICS C05G001-00; C05G003-02; C05G003-04

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

IT 131-52-2, Sodium pentachlorophenol 133-32-4, Indolebutyric acid 137-26-8, Thiram 593-50-0, Triacontanol 1214-39-7, 6-Benzylaminopurine 1303-96-4, Borax 3761-53-3, Acid scarlet **7447-40-7**, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7720-78-7, Ferrous sulfate 7722-64-7, Potassium permanganate 7733-02-0, Zinc sulfate 7758-98-7, Copper sulfate, biological studies **7778-77-0**, Potassium dihydrogen phosphate 7783-28-0, Diammonium hydrogen phosphate 7785-87-7, Manganese sulfate 10043-35-3, Boric acid, biological studies 10124-37-5, Calcium nitrate 10605-21-7, Carbendazim 12027-67-7, Ammonium molybdate 15165-79-4, Potassium 1-naphthyl acetate 24634-61-5, Potassium sorbate **25322-68-3**, Polyethylene glycol **25322-68-3D**, fatty alc. ether 73989-17-0, Avermectin 107534-96-3, Tebuconazole
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(manufacture of composite agent for crop cultivation in dry land)

IT 57-13-6, Urea, biological studies **110-26-9**, N, N'-Methylene diacrylamide 139-33-3, Disodium ethylene diamine tetraacetate 10192-85-5, Potassium acrylate 10198-40-0, Cobalt 60, biological studies
RL: AGR (Agricultural use); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(manufacture of composite agent for crop cultivation in dry land)

L192 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN

| | |
|---|---|
| ACCESSION NUMBER: | 2000:710660 CAPLUS |
| DOCUMENT NUMBER: | 133:325394 |
| TITLE: | Development of column supports for biocalalysts |
| AUTHOR(S): | Jekel, Maren |
| CORPORATE SOURCE: | Luneburg, Germany |
| SOURCE: | Landbauforschung Voelkenrode, Sonderheft (1999), 198, i-v, 1-156<br>CODEN: LVSWAI; ISSN: 0376-0723 |
| PUBLISHER: | Bundesforschungsanstalt fuer Landwirtschaft Braunschweig-Voelkenrode |
| DOCUMENT TYPE: | Journal |

LANGUAGE: German
ED Entered STN: 09 Oct 2000
AB Carrier matrixes were developed for the encapsulation of living cells. A polyvinylalc. (PVAL) hydrogel was produced from low mol. polethyleneglycols (PEG) and a PVAL solution Porous, lenticular-formed hydrogels (LentiKat) were obtained with 3 mm diameter and 200-400 μm height. A continuous production was achieved on a half-tech. scale with >0.5 kg/h (>1,000,000 Lentikats) capacity. With increased drying degree tensile strength was increased together with the E-module at decreasing drawing extension. The mech. stability was increased by reswelling media with multivalent anions like SO42- and PO43-. Higher PVAL concns. increased tensile strength and E-module at constant drawing extension. Higher mol. wts. of the additives led to lower E-module and tensile strength. An increasing PEG mol. weight gave larger pores. Increased PVAL concns. formed broader polymer links between the pores. PVAL hydrogels from 10% PVAL 17/99 and 6% PEG-1000 had a medium tensile strength of 0.48 N/mm2, an E-module of 0.11 N/mm2, and drawing extensions from 350-450%. The LentiKats were temperature stable >55° and after 4 mo stirring practically abrasion-free. Immobilizing encapsulation with Nitrosomonas at 0.06% biol. dry matter led to a maximal starting activities of 75%. Nitrobacter was not inhibited by immobilization. Maximal conversion rates were obtained from 7-8 μmol NH4+/(gKat+min). Immobilized cells were stable for several months at 4° and 20°. The stability was increased by substrates and temperature reduction towards the support metabolism
Activated immobilizates had an increased stability. LentiKats were suitable for stirring, swirl layer, and airlift reactors. Volume-time-yields were obtained of <100 mg NH4-N/l+h with a continuous nitrification at 5% immobilizate loading. Aquarium and waste deposit seepage H2O were tested as possible applications.
CC 61-5 (Water)
Section cross-reference(s): 10, 16, 38
IT **Hydrogels**
Immobilization, biochemical
(PVAL hydrogel development as a carrier matrixes for encapsulation of living cells)
IT **9002-89-5P**, Polyvinylalcohol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(hydrogel, LentiKats; PVAL hydrogel development as a carrier matrixes for encapsulation of living cells)
IT **25322-68-3P**, Polyethyleneglycol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(in enhanced PVAL hydrogel production; PVAL hydrogel produced from low mol. polethyleneglycol and polyvinylalc. solution)
IT **7447-40-7**, Potassium chloride, processes **7758-11-4**, Dipotassium hydrogen phosphate 7778-80-5, Potassium sulfate, processes 10043-52-4, Calcium chloride, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(re-swelling medium effect onPVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)

L192 ANSWER 8 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:481136 CAPLUS
DOCUMENT NUMBER: 133:59243
TITLE: Process for manufacture of water-soluble anionic flocculant using ionizing radiation, electron beam, and microwave radiation
INVENTOR(S): Dragusin, Mitica
PATENT ASSIGNEE(S): S.C. Polirad S.R.L., Bucuresti, Rom.
SOURCE: Rom., 6 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| RO 112356 | B1 | 19970829 | RO 1994-1139 | 19940704 |

PRIORITY APPLN. INFO.: RO 1994-1139 19940704

ED Entered STN: 17 Jul 2000

AB The acrylamide copolymer flocculants in the form of gel granules contain 40-50% acrylamide; 35% acrylic acid or sodium acrylate monomers and 8-10% anhydrous Na2SO4 or 6-8% Na2CO3 coupled with 2-4% monosodium phosphate; 0.01-0.02% sodium formate; 0.01-0.02% sodium or ammonium persulfate; 0.01-0.02% sodium EDTA; 0.1-0.3% ethoxylated nonylphenol; and the balance, water. Alternatively, the gel granules comprise the above copolymer components or are aqueous solns. of copolymers of 15-35% acrylic acid; 3-7% vinyl acetate; and/or 1.5-3.5% acrylamide with 0.01-0.02% ammonium or potassium persulfate; 0.1-0.4% sodium formate and the balance water; or solns. of 18-20% acrylamide; 0.3-0.5% iso-Pr alc.; 0.01-0.03% sodium or ammonium persulfate; and the balance water. The copolymers have mol. weight of 15,000,000 viscosity of 8-15 dL/g, Huggins constant of 0.15-0.45, the gel granules in diluted aqueous solution are stable for up to 2 yr. The copolymers are obtained by irradiation of the monomer solution with γ-rays from a 60Co source, dose of 10,000 Ci and adsorbed radiation of 3-10 KGy/h, electron beam irradiation using a 3-6 mEV source, and/or microwave irradiation with 30-80 W/cm3 energy source; the polymerization mechanism is radical-thermochem. An aqueous solution of acrylamide, acrylic acid, NaCl, Na formate, Na EDTA, and iso-Pr alc. was irradiated with γ-rays to obtain anionic copolymer soluble in water and suitable for use in extraction metallurgy, petroleum extraction, textile industry, etc. The obtained polymers were granulated using a 3-point 0.6-1 kW microwave source, producing 2-3 mm granules; these granules were subjected to heat treatment under microwave irradiation at temps. below 80°. The Na2SO4 and Na2CO3 are used to prevent agglomeration of gel granules upon handling and storage. The gel granules can be packaged in plastic bags for shipment and storage.

IC ICM C08F020-02
ICS C08F020-56

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 46

IT **Hydrogels**
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

IT **9003-01-4P**, Polyacrylic acid 9003-05-8P, Polyacrylamide 9003-06-9P, Acrylamide-acrylic acid copolymer 24980-58-3P, Acrylic acid-vinyl acetate copolymer

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

IT 67-63-0, Isopropyl alcohol, uses 141-53-7, Sodium formate **7558-80-7**, Monosodium phosphate **7647-14-5**, Sodium chloride, uses 27986-36-3, Ethylene glycol nonylphenyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

L192 ANSWER 1 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:614580 CAPLUS
DOCUMENT NUMBER: 143:139175
ENTRY DATE: Entered STN: 15 Jul 2005
TITLE: Frequency-assisted **transdermal** agent delivery method and system
INVENTOR(S): Chan, Keith T.; Cormier, Michel J. N.; Lin, WeiQi
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A61K038-16
SECONDARY: A61K031-4172; A61M031-00
US PATENT CLASSIF.: 514002000; 604500000; 514397000; 514171000
CLASSIFICATION: 63-6 (Pharmaceuticals)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2005153873 | A1 | 20050714 | US 2004-971441 | 20041021 |
| WO 2005069758 | A2 | 20050804 | WO 2004-US34923 | 20041021 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-535275P P 20040109
PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| US 2005153873 | ICM | A61K038-16 |
| | ICS | A61K031-4172; A61M031-00 |
| | INCL | 514002000; 604500000; 514397000; 514171000 |
| | IPCI | A61K0038-16 [ICM,7]; A61K0031-4172 [ICS,7]; A61M0031-00 [ICS,7] |

NCL 514/002.000
ECLA A61M037/00; A61M037/00U
WO 2005069758 IPCI A61K [ICM,7]

ABSTRACT:
The invention discloses an apparatus and method for transdermally delivering a biol. active agent comprising a delivery system having a microprojection member (or system) that includes a plurality of microprojections (or array thereof) that are adapted to pierce through the stratum corneum into the underlying epidermis layer, or epidermis and dermis layers, a formulation containing the biol. active agent and an oscillation-inducing device. In one embodiment, the biol. active agent is contained in a biocompatible coating that is applied to the microprojection member. In a further embodiment, the delivery system includes a gel pack having an agent-containing hydrogel formulation that is disposed on the microprojection member after application to the skin of a patient. In an alternative embodiment, the biol. active agent is contained in both the coating and the hydrogel formulation.

SUPPL. TERM: frequency assisted **transdermal** agent delivery system; oscillation device **transdermal** agent delivery microprojection system

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CRM1970; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CRM197; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(E7; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antibodies and Immunoglobulins
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(IgE, IgE peptide suppressors; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L1; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(L2; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(M (streptococcal); frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Transcription factors
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(NF-κB (nuclear factor of κ light chain gene enhancer in B-cells), NF-κB regulatory signaling proteins; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(OMP (outer membrane protein); frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(S; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Immunostimulants
(adjuvants; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Alcohols, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkoxylated; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Polyoxyalkylenes, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyl group-terminated; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Polymers, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amphiphilic and hydrophilic; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Vasoconstrictors
(and pathway patency modulators; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Polymers, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(block; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(capsid; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Drug delivery systems
(carriers; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Toxins
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cholera, B subunit; frequency-assisted

**transdermal** agent delivery method and system)

INDEX TERM: Polysaccharides, biological studies
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antibodies and Immunoglobulins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments, Fab; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Anti-inflammatory agents
Anticoagulants
Antioxidants
BAC (bacterial artificial chromosome)
Bordetella pertussis
Clostridium tetani
Corynebacterium diphtheriae
Cosmids
Cytomegalovirus
Diphtheria
Eubacteria
Hepatitis
Hepatitis B virus
Hepatitis C virus
Human
Human herpesvirus 3
Human papillomavirus
Human papillomavirus 11
Human papillomavirus 16
Human papillomavirus 18
Human papillomavirus 6
**Hydrogels**
Inflammation
Influenza
Legionella pneumophila
Lyme disease
Neisseria meningitidis
Pertussis
Plasmids
Pseudomonas aeruginosa
Rabies
Rubella virus
Streptococcus group A
Streptococcus pneumoniae
Surfactants
Thrombolytics
Treponema pallidum
Vaccines
Vibrio cholerae
Virus
Viscosity
YAC (yeast artificial chromosome)
Zwitterions
(frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: DNA
Enkephalins
Glycoproteins
Interferons

Interleukin 10
Interleukins
Lipopolysaccharides
Lipoproteins
Neurotrophic factors
Nucleic acids
Oligonucleotides
Oligosaccharides, biological studies
Peptides, biological studies
Platelet-derived growth factors
Proteins
RNA
Tumor necrosis factors
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Albumins, biological studies
Amino acids, biological studies
Heat-shock proteins
Interleukin 12
Interleukin 15
Interleukin 18
Interleukin 2
Oligodeoxyribonucleotides
Polyoxyalkylenes, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Neisseria meningitidis
(group B; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antigens
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B core; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antigens
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, S-protein; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antigens
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, pre-S1 protein; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Antigens
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B surface, pre-S2 protein; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Proteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis C virus surface; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Drug delivery systems
(liposomes; frequency-assisted **transdermal**

agent delivery method and system)
INDEX TERM: Counterions
(low volatility; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Artificial chromosome
(mammalian; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Infection
(measles; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Apparatus
(oscillation-inducing device; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Osmosis
(osmotic agents; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Salivary gland, disease
(parotid, mumps; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Polyamides, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids); frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Hormone antagonists
(prostaglandin antagonists; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Skin
(stratum corneum, microprojection piercing; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Lipoproteins
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Toxoids
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tetanus; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Drug delivery systems
(**transdermal**; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Acoustic devices
(ultrasonic device; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Infection
(varicella; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Infection
(variola; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Interferons
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: Transforming growth factors
ROLE: PAC (Pharmacological activity); THU (Therapeutic use);

BIOL (Biological study); USES (Uses)
(β-; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Interferons
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: Interferons
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 9002-72-6, Somatotropin
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(7; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 95729-65-0, NT 36
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NT 36; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 9012-72-0, Glucan
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(algal; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 85637-73-6, Atrial natriuretic peptide
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and ANP clearance inhibitors; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 83652-28-2, Calcitonin gene-related peptide
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and CSI's; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 9002-64-6, Parathyroid hormone 11000-17-2, Antidiuretic hormone
ROLE: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(and agonists and antagonists; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 58-82-2, Bradykinin
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(and antagonists; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 11128-99-7, Angiotensin II
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 50-56-6, Oxytocin, biological studies 51-43-4, Epinephrine 56-59-7, Felypressin 59-42-7, Phenylephrine 84-22-0, Tetrahydrozoline 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 102-45-4, Cyclopentamine 123-82-0, Tuaminoheptane 437-38-7, Fentanyl 501-15-5,

Deoxyepinephrine 526-36-3, Xylometazoline 543-82-8, Octodrine 835-31-4, Naphazoline 1082-57-1, Tramazoline 1491-59-4, Oxymetazoline 2809-21-4, Etidronic acid 3397-23-7, Ornipressin 7568-93-6, Phenylethanolamine 8001-27-2, Hirudin 9001-09-6, Chymopapain 9002-01-1, Streptokinase 9002-60-2, Corticotropin, biological studies 9002-60-2D, ACTH, analogs 9002-61-3, Chorionic gonadotropin 9002-67-9, Luteinizing hormone 9005-49-6, Dalteparin, biological studies 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9011-97-6, Cholecystokinin 9034-39-3, Growth hormone releasing factor 9034-40-6, LHRH 9034-40-6D, LHRH, analogs 9034-42-8, β-MSH 9039-53-6, Urokinase 9041-92-3, α1-Antitrypsin 10596-23-3, Clodronic acid 11096-26-7, Erythropoietin 14838-15-4, Phenylpropanolamine 16679-58-6, Desmopressin 16960-16-0, ACTH (1-24) 17692-22-7, Metizoline 24243-97-8, Tymazoline 30924-31-3, Cafaminol 33515-09-2, Gonadorelin 35121-78-9, Epoprostenol 37300-21-3, Pentosan polysulfate 37353-41-6, Cysteine protease 37571-84-9, Amidephrine 40391-99-9, Pamidronic acid 40507-78-6, Indanazoline 42794-76-3, Midodrine 43157-23-9 51110-01-1, Somatostatin 53714-56-0, Leuprolide 56030-54-7 57773-63-4, Triptorelin 57982-77-1, Buserelin 59708-52-0, Carfentanyl 60118-07-2, Endorphin 61380-40-3, Lofentanil 61489-71-2, Menotropin 62087-72-3, Pentigetide 62683-29-8, Colony-stimulating factor 65807-02-5, Goserelin 66376-36-1, Alendronic acid 67763-96-6, IGF-1 69521-94-4, Thymosin α1 71195-58-9, Alfentanyl 74812-63-8, Nordefrin 74863-84-6, Argatroban 76932-56-4, Nafarelin 83150-76-9, Octreotide 83712-60-1, Defibrotide 83869-56-1, GM-CSF 89987-06-4, Tiludronic acid 92046-97-4, α-Atrial natriuretic factor 97048-13-0, Urofollitropin 100179-39-3, C5a Peptidase 104993-28-4, Fondaparinux 105462-24-6, Risedronic acid 114084-78-5, Ibandronic acid 114471-18-0, Brain natriuretic peptide 118072-93-8, Zoledronic acid 118549-37-4, Insulinotropin 124351-85-5, Incadronic acid 127464-60-2, VEGF 128270-60-0, Hirulog 132875-61-7, Remifentanyl 139639-23-9, Tissue plasminogen activator 143003-46-7, Ceredase 143011-72-7, G-CSF 679809-58-6, Enoxaparin sodium 858360-14-2, RWJ 445167 858360-15-3, RWJ 671818
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 50-81-7, Ascorbic acid, biological studies 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies 56-87-1, Lysine, biological studies 57-50-1, Sucrose, biological studies 60-00-4, EDTA, biological studies 63-68-3, Methionine, biological studies 71-00-1, Histidine, biological studies 74-79-3, Arginine, biological studies 77-86-1, Tromethamine 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, salts 80-69-3, Tartronic acid 86-01-1 87-69-4, Tartaric acid, biological studies 97-65-4, Itaconic acid, biological studies 99-14-9, Tricarballylic acid 99-20-7, Trehalose 102-71-6, Triethanolamine, biological studies 107-64-2 110-15-6, Succinic acid, biological studies 110-16-7,

Maleic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-91-8, Morpholine, biological studies 110-94-1, Glutaric acid 111-42-2, Diethanolamine, biological studies 112-00-5, Dodecyltrimethyl ammonium chloride 123-03-5, Cetylpyridinium chloride 124-04-9, Adipic acid, biological studies 125-03-1, Hydrocortamate hydrochloride 134-03-2, Sodium ascorbate 141-43-5, Monoethanolamine, biological studies 141-82-2, Malonic acid, biological studies 146-91-8, Guanosine diphosphate 151-21-3, Sodium dodecyl sulfate, biological studies 151-73-5 463-79-6, Carbonic acid, biological studies 470-55-3, Stachyose 498-23-7, Citraconic acid 498-24-8, Mesaconic acid 503-49-1, Meglutol 512-69-6, Raffinose 597-12-6, Melezitose 597-44-4, Citramalic acid 994-36-5, Sodium citrate 1305-62-0, Calcium hydroxide, biological studies 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1337-30-0, Sorbitan laurate 1715-33-9, Prednisolone 21-succinate sodium salt 1997-15-5 2145-14-4, Paramethasone disodium phosphate 2375-03-3 3416-24-8, Glucosamine 5015-36-1 6000-74-4, Hydrocortisone 21-phosphate disodium salt 6284-40-8, Methylglucamine 6915-15-7, Malic acid 7440-66-6D, Zinc, -proline complex **7647-14-5**, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 7664-41-7, Ammonia, biological studies 7664-93-9, Sulfuric acid, biological studies 7784-30-7, Aluminum phosphate **9002-89-5**, Poly(vinyl alcohol 9002-92-0, Laureth-4 **9003-39-8** 9004-32-4, Sodium carboxymethyl cellulose 9004-34-6D, Cellulose, derivs. 9004-58-4, Ethylhydroxyethylcellulose 9004-62-0, Hydroxyethylcellulose 9004-64-2, Hydroxypropylcellulose 9004-65-3, Hydroxypropyl-methylcellulose 9004-67-5, Methylcellulose 9005-64-5, Tween 20 9005-65-6, Tween 80 9011-18-1, Dextran sulfate sodium 9032-42-2, Hydroxyethylmethylcellulose 9041-22-9, β-Glucan 12441-09-7D, Sorbitan, derivs. 21645-51-2, Aluminum hydroxide, biological studies 24991-23-9 25249-16-5, Poly(2-hydroxyethylmethacrylate) **25322-68-3**, Poly(ethylene oxide) 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid 25702-74-3 26062-48-6, Polyhistidine 26063-13-8, Polyaspartic acid 26854-81-9, Polyhistidine 60355-78-4, Murametide 66112-59-2, Termurtide 70280-03-4 79787-27-2 83461-56-7, Mtp-pe 99011-02-6, Imiquimod 112668-45-8 121288-39-9, Loxoribine 133863-30-6, Murapalmitine 141256-04-4, QS-21 143005-30-5, ImmTher 144875-48-9, S-28463 156028-14-7, Sodium lauroamphoacetate 159940-37-1, Pleuran 467423-50-3, Theramide 497929-24-5 691397-13-4, CRL 1005 852155-91-0 852155-92-1
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(frequency-assisted **transdermal** agent delivery method and system)

INDEX TERM: 9004-10-8, Insulin, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gamma-; frequency-assisted **transdermal** agent delivery method and system)

Searched by Barb O'Bryen, STIC 2-2518

INDEX TERM: 9015-94-5, Renin, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; frequency-assisted **transdermal** agent delivery method and system)
INDEX TERM: 106021-96-9
ROLE: PRP (Properties)
(unclaimed sequence; frequency-assisted **transdermal** agent delivery method and system)

L192 ANSWER 2 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:467718 CAPLUS
DOCUMENT NUMBER: 141:28650
ENTRY DATE: Entered STN: 10 Jun 2004
TITLE: Mannose-based fast dissolving tablets
INVENTOR(S): Fu, Yourong; Jeong, Seong Hoon; Kim, Jeanny; Callihan, Jacqueline Anne; Pai, Chaul Min; Park, Sang Yeob; Seomoon, Gun; Park, Kinam
PATENT ASSIGNEE(S): Purdue Research Foundation, USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A61K009-20
CLASSIFICATION: 63-6 (Pharmaceuticals)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2004047810 | A1 | 20040610 | WO 2003-US38145 | 20031125 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1569622 | A1 | 20050907 | EP 2003-796534 | 20031125 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |

PRIORITY APPLN. INFO.: US 2002-429026P P 20021125
WO 2003-US38145 W 20031125

PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| WO 2004047810 | ICM | A61K009-20 |
| | IPCI | A61K0009-20 [ICM,7] |
| | ECLA | A61K009/00M18B |
| EP 1569622 | IPCI | A61K0009-20 [ICM,7] |
| | ECLA | A61K009/00M18B |

ABSTRACT:
The present invention employs mannose as a principal component in the fabrication of fast dissolving tablets. The mannose component imparts both structure-forming and fast-dissoln. properties to the tablets. Granulation of tablet components and humidification forms strong liquid bridges at the surface

interfaces of mannose particles, which leads to strengthened tablets. The mannose particles, however, remain porous following compression so that contact with moisture, e.g., saliva in the mouth, leads rapidly to tablet disintegration and dissoln.

SUPPL. TERM: mannose fast dissolving drug delivery tablet

INDEX TERM: Drying
(air, of pharmaceutical tablet; mannose-based fast dissolving tablets)

INDEX TERM: Air conditioning
(humidification, of pharmaceutical tablet; mannose-based fast dissolving tablets)

INDEX TERM: Coloring materials
Flavoring materials
Lubricants
Sweetening agents
(mannose-based fast dissolving tablets)

INDEX TERM: Alditols
Carbohydrates, biological studies
Gelatins, biological studies
Kaolin, biological studies
Polymers, biological studies
Polyoxyalkylenes, biological studies
Polyoxyalkylenes, biological studies
ROLE: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mannose-based fast dissolving tablets)

INDEX TERM: Drying
(microwave, of pharmaceutical tablet; mannose-based fast dissolving tablets)

INDEX TERM: Drying
(oven, of pharmaceutical tablet; mannose-based fast dissolving tablets)

INDEX TERM: **Hydrogels**
(superporous; mannose-based fast dissolving tablets)

INDEX TERM: Drug delivery systems
(tablet disintegrant; mannose-based fast dissolving tablets)

INDEX TERM: Drug delivery systems
(tablets, fast dissolving; mannose-based fast dissolving tablets)

INDEX TERM: Drying
(vacuum, of pharmaceutical tablet; mannose-based fast dissolving tablets)

INDEX TERM: 7631-86-9, Silicon dioxide, biological studies
ROLE: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(colloidal; mannose-based fast dissolving tablets)

INDEX TERM: 50-70-4, Sorbitol, biological studies 50-99-7, Dextrose, biological studies 57-11-4, Stearic acid, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 63-42-3, Lactose 68-04-2, Sodium citrate 69-65-8, Mannogem EZ 69-79-4, Maltose 77-92-9, Citric acid, biological studies 87-99-0, Xylitol 99-20-7, Trehalose 100-88-9, Cyclamate 128-44-9, Sodium saccharin 144-55-8, Sodium bicarbonate, biological studies 149-32-6, Erythritol 298-14-6, Potassium bicarbonate 471-34-1, Calcium carbonate, biological studies 557-04-0, Magnesium stearate 585-86-4, Lactitol 585-88-6, Maltitol 866-83-1, Potassium citrate 866-84-2, Potassium citrate

994-36-5, Sodium citrate 3458-28-4, Mannose 4070-80-8, Sodium stearyl fumarate **7447-40-7**, Potassium chloride, biological studies **7558-79-4**, Sodium phosphate dibasic **7558-80-7**, Sodiumphosphate monobasic. **7647-14-5**, Sodium chloride, biological studies 7757-93-9, Dibasic calcium phosphate 7758-87-4, Tribasic calcium phosphate 7778-18-9, Calcium sulfate 7778-49-6, Potassium citrate 9002-18-0, Agar **9002-89-5**, Polyvinylalcohol **9003-39-8**, Povidone **9003-39-8D**, Polyvinylpyrrolidone, crosslinked 9004-35-7, Cellulose acetate 9004-53-9, Dextrin 9004-57-3, Ethylcellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9005-25-8, Starch, biological studies 9012-76-4, Chitosan 9032-42-2, Hydroxyethylmethyl cellulose 9050-04-8, Carboxymethylcellulose-calcium salt 9050-36-6, Maltodextrin 9063-38-1, Sodium starch glycolate 12167-74-7, Calcium hydroxide phosphate (Ca5(OH)(PO4)3) 12619-70-4, Cyclodextrins 14807-96-6, Talc, biological studies 18641-57-1, Glyceryl behenate 18996-35-5, Sodium citrate 22839-47-0, Aspartame **25322-68-3**, Polyethylene glycol 39404-33-6, Dextrates 68424-04-4, Polydextrose 74811-65-7, Croscarmellose sodium 149202-17-5, CELLACTOSE 198828-48-7 481648-77-5, STARLAC
ROLE: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mannose-based fast dissolving tablets)

INDEX TERM: 9004-34-6D, Cellulose, silicified microcryst.
ROLE: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(powdered; mannose-based fast dissolving tablets)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Eoga; US 5939091 A 1999 CAPLUS
(2) Jain; US 6316029 B1 2001 CAPLUS
(3) Sayer; US 6096339 A 2000 CAPLUS

L192 ANSWER 3 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:780335 CAPLUS
DOCUMENT NUMBER: 141:301507
ENTRY DATE: Entered STN: 24 Sep 2004
TITLE: Ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials
INVENTOR(S): Hu, Zhenze; Salamone, Joseph C.; Jani, Dharmendra
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: C11D001-00
US PATENT CLASSIF.: 510112000
CLASSIFICATION: 63-7 (Pharmaceuticals)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2004186028 | A1 | 20040923 | US 2003-392743 | 20030319 |
| CA 2519222 | AA | 20041007 | CA 2004-2519222 | 20040318 |

WO 2004084960 A1 20041007 WO 2004-US8237 20040318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1603599 A1 20051214 EP 2004-757795 20040318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK
PRIORITY APPLN. INFO.: US 2003-392743 A 20030319
WO 2004-US8237 W 20040318

PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| US 2004186028 | ICM | C11D001-00 |
| | INCL | 510112000 |
| | IPCI | C11D0001-00 [ICM,7] |
| | NCL | 510/112.000 |
| | ECLA | A61L012/14B2; C11D003/00B16; C11D003/37B2; C11D003/37C8F; C11D003/37C8H |
| CA 2519222 | IPCI | A61L0012-14 [ICM,7]; C11D0003-00 [ICS,7]; C11D0003-37 [ICS,7]; C11D0001-38 [ICS,7]; C11D0001-72 [ICS,7] |
| | ECLA | A61L012/14B2; C11D003/00B16; C11D003/37B2; C11D003/37C8F; C11D003/37C8H |
| WO 2004084960 | IPCI | A61L0012-14 [ICM,7]; C11D0003-00 [ICS,7]; C11D0001-72 [ICS,7]; C11D0001-38 [ICS,7]; C11D0003-37 [ICS,7] |
| | ECLA | A61L012/14B2; C11D003/00B16; C11D003/37B2; C11D003/37C8F; C11D003/37C8H |
| EP 1603599 | IPCI | A61L0012-14 [ICM,7]; C11D0003-00 [ICS,7]; C11D0001-72 [ICS,7]; C11D0001-38 [ICS,7]; C11D0003-37 [ICS,7] |
| | ECLA | A61L012/14B2; C11D003/00B16; C11D003/37B2; C11D003/37C8F; C11D003/37C8H |

ABSTRACT:
The present invention is directed to an ophthalmic solution for soft contact lenses for controlled release of polyethers into an eye's tear film. Polyether components of the subject solution are released from the soft contact lens material matrix over long time periods to produce longer lasting wetting performance, improved lubricity, improved end-of-the-day comfort and reduced feeling of dryness from wearing contact lenses. The present invention also includes the use of cationic polyelectrolytes for controlling the swelling of hydrogel contact lenses typically caused by the absorption of high concns. of polyethers. Thus, an ophthalmic lens care multipurpose solution was prepared by mixing boric acid 0.85, monobasic sodium phosphate 0.15, dibasic sodium phosphate 0.31, sodium chloride 0.26, 30% hydroxyalkyl phosphonate 0.1, 20% polyhexamethylene biguanide 1.1 ppm, and Luviquat FC 550 (polyquaternium 10) 0.02 part.

SUPPL. TERM: ophthalmic soln absorption hydrogel soft contact lens
cationic polyelectrolyte
INDEX TERM: Bicarbonates
Borates
Phosphates, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(buffers; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: Polyelectrolytes
(cationic; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: Antimicrobial agents
Human
**Hydrogels**
Prosthetic materials and Prosthetics
Swelling, physical
(ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: Polyethers, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: Contact lenses
(soft; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: Drug delivery systems
(solns., ophthalmic, drug; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 95144-24-4, Luviquat FC 550
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Luviquat FC 370, cationic polyelectrolytes; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 691397-13-4, Pluronic F 127
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Pluronic P 123; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 81859-24-7, Polymer JR 400
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Polymer LK, Polymer LR 400, Polymer JR 30M, cationic polyelectrolytes; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 77-86-1, Tromethamine 77-92-9, biological studies
102-71-6, Triethanolamine, biological studies 111-42-2, Diethanolamine, biological studies 141-43-5, Ethanolamine, biological studies **7558-79-4**, Dibasic sodium phosphate **7558-80-7**, Monobasic sodium phosphate
10043-35-3, Boric acid, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(buffers; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 53633-54-8, Polyquaternium 11 150599-70-5, Polyquaternium 44 174761-16-1, Polyquaternium 46
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic polyelectrolytes; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: 50-99-7, Dextrose, biological studies 56-81-5, Glycerin,

biological studies 57-55-6, Propylene glycol, biological studies 3458-28-4, Mannose **7447-40-7**, Potassium chloride, biological studies **7647-14-5**, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 10043-52-4, Calcium chloride, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tonicity adjusting agents; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

INDEX TERM: **9002-89-5**, Poly(vinyl alcohol) **9003-39-8**, Poly(N-vinylpyrrolidone) 9004-62-0, Hydroxyethyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(viscosity builders; ophthalmic solution for absorption into and controlled release over time from hydrogel biomaterials)

L192 ANSWER 4 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2002:252405 CAPLUS
DOCUMENT NUMBER: 136:284445
ENTRY DATE: Entered STN: 04 Apr 2002
TITLE: Self-destructing, controlled release peroral drug delivery system
INVENTOR(S): Ritschel, Wolfgang A.; Agrawal, Mukul A.
PATENT ASSIGNEE(S): University of Cincinnati, USA
SOURCE: U.S., 34 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A61K009-24
SECONDARY: A61K009-20; A61K009-26; A61K009-22
US PATENT CLASSIF.: 424473000
CLASSIFICATION: 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6365185 | B1 | 20020402 | US 1999-277258 | 19990326 |
| PRIORITY APPLN. INFO.: | | | US 1998-79403P P | 19980326 |

PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| US 6365185 | ICM | A61K009-24 |
| | ICS | A61K009-20; A61K009-26; A61K009-22 |
| | INCL | 424473000 |
| | IPCI | A61K0009-24 [ICM,7]; A61K0009-20 [ICS,7]; A61K0009-26 [ICS,7]; A61K0009-22 [ICS,7] |
| | NCL | 424/473.000; 424/464.000; 424/465.000; 424/466.000; 424/468.000; 424/469.000; 424/470.000; 424/471.000; 424/472.000 |
| | ECLA | A61K009/00L4 |

ABSTRACT:
The present invention relates to tablets which are time-controlled to release active agent at different rates in different regions of the digestive tract in

order to maintain a substantially constant concentration in the blood. In one embodiment, a new modified release drug delivery system, for once a day peroral use, consists of a solid core comprising an active agent together with a hydrogel, with the solid core being coated with a semi-permeable, self-destructing membrane which is optionally drilled to provide a release orifice, and then optionally further coated with the same or different active agent material. The device delivers the active agent in a substantially constant ED for the duration of the transit through the stomach and small intestine, followed by accelerated release when reaching the large intestine. For example, a hydrogel piston pump was prepd. contg. a drug core and a hydrogel disk enclosed in a compression-coated shell of Et cellulose. The shell contained a delivery orifice and coated disintegrant. The coated disintegrant provided the final burst effect to overcome the physiol. decrease in absorption. An immediate release layer was included to compensate for the lag time in delivery of a model drug (promethazine) from the system. The pharmacokinetic parameters of promethazine were studied in humans in comparison with a com. available immediate release product, Phenergan. Different pharmacokinetic profiles were obtained for these two prepns. This can be attributed not to a difference in the disposition of the drug in the body, which is not expected to change, but in the difference in the absorption of the drug. In the case of the modified release delivery system of the present invention (a self-destructing, hydrogel piston pump), the absorption of the drug occurs over a much longer period of time and the drug was not completely eliminated by the time the last sample was collected. The incomplete elimination coupled with the prolonged absorption phase can result in the obsd. differences in the pharmacokinetic parameters.

SUPPL. TERM: polymer swelling controlled release tablet disintegration

INDEX TERM: Polyelectrolytes
(complexes; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

INDEX TERM: Ethers, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(glycidyl; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

INDEX TERM: Epoxides
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyepoxides; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

INDEX TERM: Binders
Human
**Hydrogels**
Pore size
Thickening agents
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

INDEX TERM: Amino acids, biological studies
Polyesters, biological studies
Polymers, biological studies
Polyoxyalkylenes, biological studies
Polysaccharides, biological studies
Polyurethanes, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

INDEX TERM: Intestine
(small; self-destructing, controlled release tablets

containing polymer swelling agents and disintegrants)
INDEX TERM: Drug delivery systems
(tablets, controlled-release; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Transforming growth factors
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α-; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Interferons
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Transforming growth factors
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β1-; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Transforming growth factors
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β2-; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Transforming growth factors
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β3-; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: Interferons
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(γ; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: 9002-64-6, PTH
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptides; self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: 60-87-7, Promethazine 113-92-8, Chlorpheniramine maleate
ROLE: PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: 58-55-9, Theophylline, biological studies 89-57-6, 5-Aminosalicylic acid 2152-44-5, Betamethasone-17-valerate 5534-09-8, Beclomethasone dipropionate 8001-27-2, Hirudin 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 39175-74-1, Prednisolone metasulfobenzoate 51333-22-3, Budesonide 51384-51-1, Metoprolol 55560-96-8, Tixocortol pivalate 67763-96-6, IGF-1 90566-53-3, Fluticasone 134578-96-4 134822-78-9 142118-32-9 147398-01-4 147497-10-7
ROLE: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)
INDEX TERM: 50-69-1, Ribose 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid, biological studies 50-99-7,

D-Glucose, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-81-5, Glycerin, biological studies 57-13-6, Urea, biological studies 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 58-86-6, Xylose, biological studies 59-23-4, D-Galactose, biological studies 60-00-4, Edetic acid, biological studies 61-90-5, Leucine, biological studies 63-42-3, Lactose 63-68-3, Methionine, biological studies 68-04-2, Sodium citrate 69-65-8, Mannitol 69-79-4, Maltose 77-92-9, Citric acid, biological studies 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, Methacrylic acid, esters, polymers 81-07-2, Saccharin 87-99-0, Xylitol 107-41-5, Hexylene glycol 108-31-6D, Maleic anhydride, copolymers 110-44-1, Sorbic acid 127-08-2, Potassium acetate 127-09-3, Sodium acetate 128-44-9, Sodium saccharin 134-03-2, Sodium ascorbate 139-33-3, Edetate disodium 147-81-9, Arabinose 512-69-6, Raffinose 532-32-1, Sodium benzoate 546-93-0, Magnesium carbonate 556-32-1, Magnesium succinate 585-88-6, Maltitol 3458-28-4, D-Mannose 6915-15-7, Malic acid **7447-40-7**, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies **7558-79-4 7647-14-5**, Sodium chloride, biological studies 7704-73-6, Sodium fumarate **7758-11-4** 7786-30-3, Magnesium chloride, biological studies 9002-18-0D, Agar, crosslinked **9002-89-5**, Poly(vinyl alcohol) **9003-01-4**, Polyacrylic acid **9003-01-4D**, Polyacrylic acid, salts 9003-05-8, Polyacrylamide 9003-09-2, Poly(vinyl methyl ether) **9003-39-8**, Poly(vinylpyrrolidone) 9004-32-4, Carboxymethyl cellulose 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, ethers 9004-35-7, Cellulose acetate 9004-38-0, Cellulose acetate phthalate 9004-39-1, Cellulose acetate propionate 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-63-1, Hydroxyethyl cellulose acetate 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9005-25-8D, Starch, graft copolymers 9005-32-7, Alginic acid 9005-38-3, Sodium alginate 9006-26-2, Ethylene-maleic anhydride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-13-6, Maleic anhydride-styrene copolymer 9012-09-3, Cellulose triacetate 9012-72-0D, Polyglucan, diester crosslinked 9032-35-3, Cellulose acetate succinate 9040-62-4, Amylose triacetate 9041-69-4, Cellulose acetate p-toluene sulfonate 14066-20-7, Dihydrogen phosphate, biological studies 24937-78-8D, hydroxylated 25086-15-1, Methacrylic acid-methyl methacrylate copolymer **25322-68-3**, Polyethylene glycol 25722-45-6, Maleic anhydride-propylene copolymer 26009-03-0, Poly(glycolic acid), SRU 26124-68-5, Poly(glycolic acid) 26426-80-2, Isobutylene-maleic anhydride copolymer 28476-72-4, Indene-maleic anhydride polymer 33434-24-1, Ethyl acrylate-methyl methacrylate-trimethylammonioethyl methacrylate chloride copolymer 61944-28-3, Butene-maleic anhydride copolymer 63340-54-5, β-Glucan triacetate 66828-18-0, Dextrate 97089-04-8, Cellulose acetate ethyl carbamate 97089-05-9, Cellulose acetate methyl carbamate

110540-08-4, Cellulose acetate laurate 118440-35-0, Agar acetate 118440-59-8, Cellulose acetate ethyl carbonate 118440-61-2, Cellulose acetate methyl sulfonate 118441-60-4, Cellulose acetate dimethylaminoacetate 118441-64-8, Locust bean gum triacetate 172825-35-3, Cellulose acetate butyl sulfonate 288156-15-0, D-Glucan acetate
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(self-destructing, controlled release tablets containing polymer swelling agents and disintegrants)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

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(6) Conte; US 5681583 A 1997 CAPLUS
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L192 ANSWER 5 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:731261 CAPLUS
DOCUMENT NUMBER: 143:185829
ENTRY DATE: Entered STN: 12 Aug 2005
TITLE: Calibration and storage of pH electrodes using hydrogels
PATENT ASSIGNEE(S): Hamilton Bonaduz AG, Switz.
SOURCE: Ger. Gebrauchsmusterschrift, 6 pp.
CODEN: GGXXFR
DOCUMENT TYPE: Patent
LANGUAGE: German
INT. PATENT CLASSIF.:
MAIN: G01N027-28
SECONDARY: G01N027-333; G01N027-38
CLASSIFICATION: 79-7 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 202004002433 | U1 | 20050811 | DE 2004-202004002433 | 20040217 |

EP 1564549 A1 20050817 EP 2005-3338 20050216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU
PRIORITY APPLN. INFO.: DE 2004-202004002433U 20040217
PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| DE 202004002433 | ICM | G01N027-28 |
| | ICS | G01N027-333; G01N027-38 |
| | IPCI | G01N0027-28 [ICM,7]; G01N0027-333 [ICS,7]; G01N0027-38 [ICS,7] |
| | ECLA | G01N027/28; G01N027/416D1 |
| EP 1564549 | IPCI | G01N0027-416 [ICM,7] |
| | ECLA | G01N027/28; G01N027/416D1 |

ABSTRACT:
Hydrogels are used for the calibration and storage of pH electrodes which are based on cross-linked polyacrylamide. The hydrogel contains 2-10 weight% acrylamide and 1-10 weight% N,N'-methylenebisacrylamide as a crosslinking agent. The hydrogel contains buffer solns. with pH values of 2-12. The hydrogel contains partially water and 10-80 volume% of a wetting agent, such as glycerin, ethylene glycol, or propylene glycol.

SUPPL. TERM: calibration storage pH electrode hydrogel polyacrylamide buffer wetting agent

INDEX TERM: Acrylic polymers, uses
Polysaccharides, uses
Polysiloxanes, uses
Resins
ROLE: NUU (Other use, unclassified); USES (Uses)
(calibration and storage of pH electrodes using hydrogels)

INDEX TERM: 144-55-8, Sodium bicarbonate, uses 497-19-8, Sodium carbonate, uses 1310-73-2, Sodium hydroxide, uses 1330-43-4, Sodium borate 5949-29-1, Citric acid monohydrate **7558-79-4**, Disodium phosphate **7778-77-0**, Monopotassium phosphate
ROLE: NUU (Other use, unclassified); USES (Uses)
(buffer; calibration and storage of pH electrodes using hydrogels)

INDEX TERM: 58059-65-7, Acrylamide-bisacrylamide copolymer
ROLE: CPS (Chemical process); FMU (Formation, unclassified); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process); USES (Uses)
(calibration and storage of pH electrodes using hydrogels)

INDEX TERM: **7447-40-7**, Potassium chloride, uses 9000-69-5, Pectin **9002-89-5 9003-39-8**, Polyvinylpyrrolidone 9004-34-6D, Cellulose, hydroxulated derivs. 9004-54-0, Dextran, uses 26628-22-8, Sodium azide
ROLE: NUU (Other use, unclassified); USES (Uses)
(calibration and storage of pH electrodes using hydrogels)

INDEX TERM: 79-06-1, Acrylamide, reactions **110-26-9**, Bisacrylamide
ROLE: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(polymerization; calibration and storage of pH electrodes using
hydrogels)
INDEX TERM: 56-81-5, Glycerine, uses 57-55-6, Propylene glycol, uses
107-21-1, Ethylene glycol, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(wetting agent; calibration and storage of pH electrodes
using hydrogels)

L192 ANSWER 6 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1294275 CAPLUS
DOCUMENT NUMBER: 144:50888
ENTRY DATE: Entered STN: 12 Dec 2005
TITLE: Manufacture of composite agent for crop cultivation in dry land
INVENTOR(S): Wang, Shuyu
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
INT. PATENT CLASSIF.:
MAIN: C05G003-00
SECONDARY: C05G001-00; C05G003-02; C05G003-04
CLASSIFICATION: 19-6 (Fertilizers, Soils, and Plant Nutrition)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| CN 1580010 | A | 20050216 | CN 2004-10013758 | 20040519 |
| PRIORITY APPLN. INFO.: | | | CN 2004-10013758 | 20040519 |

PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| CN 1580010 | ICM | C05G003-00 |
| | ICS | C05G001-00; C05G003-02; C05G003-04 |
| | IPCI | C05G0003-00 [ICM,7]; C05G0001-00 [ICS,7]; C05G0003-02 [ICS,7]; C05G0003-04 [ICS,7] |

ABSTRACT:
The title agent is composed of (by weight%): AU-type water absorber 0-65, urea 3-20, potassium dihydrogen phosphate 3-20, diammonium hydrogen phosphate 0-20, calcium nitrate 0-1.5, magnesium sulfate 0-1.5, ammonium molybdate 0.01-0.08, zinc sulfate 0-0.8, manganese sulfate 0.2-1.0, boric acid or borax 0.6-3.0, ferrous sulfate 0.2-1.0, potassium fulvate 0-2.5, disodium ethylene diamine tetraacetate 0-5.0, fatty alc. polyoxyethylene ether 0-0.4, 6-benzylaminopurine 0-0.04, triacontanol 0-0.10, potassium naphthyl acetate 0-0.10, indolebutyric acid 0-0.01, gibberellin 0-0.05, sodium pentachlorophenol 0-0.6, potassium sorbate 0-0.06, triazolone 0-1.5, tebuconazole 0-1.2, thiram 0-0.6, carbendazim 0-1.4, avermectin 0-5.0, acid scarlet 0-0.8, humic acid 0-1.0, copper sulfate 0-0.5, potassium permanganate 0-0.8, potassium chloride 0-10, polyethylene glycol 0-2.0, and bentonite or water balance. This agent has pesticidal, bactericidal, and fertilizing effects, and has the advantages of no toxicity, no environment pollution, and low cost.

SUPPL. TERM: pesticide bactericide fertilizer manuf
INDEX TERM: Antibacterial agents
Pesticides
(manufacture of composite agent for crop cultivation in dry land)

Fink, David J., Baltimore, MD, United States
Bloom, Leonard, Owings Mills, MD, United States
PATENT ASSIGNEE(S): Chondros, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2001051834 | A1 | 20011213 |
| | US 6662805 | B2 | 20031216 |
| APPLICATION INFO.: | US 2001-922909 | A1 | 20010806 (9) |

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-825632, filed on 4 Apr 2001, PENDING Continuation-in-part of Ser. No. US 2000-712662, filed on 14 Nov 2000, PENDING Continuation-in-part of Ser. No. US 1999-275319, filed on 24 Mar 1999, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LEONARD BLOOM & ASSOCIATES, LLC, Suite 905, 401 Washington Avenue, Towson, MD, 21204
NUMBER OF CLAIMS: 70
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 833
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention is a method for the implantation of a combination of cells or cell-microcarrier aggregates wherein one component comprises a solid implantable construct and a second component comprises an injectable formulation. For example, in one embodiment, the solid implant may be first implanted to fill the majority of the cavity receiving the implant, and then cells or cell-microcarrier aggregates in an injectable format, with or without the addition of gelling materials to promote rapid gelling in situ, may be injected into spaces surrounding the solid implant in order to secure the solid implant in the site and/or to promote rapid adherence and/or integration of the solid implant to surrounding tissues. Also contemplated in this embodiment is that the cellular composition of the injectable component may differ from that of the solid component. For example, the solid implant may result from the culturing of chondrocytes on microcarriers or scaffolds, thereby resulting in an implant having cartilage-like properties, whereas the injectable cells or aggregates may result from the culturing of stem cells, resulting thereby in cells capable of producing cells of a chondrogenic, fibroblastic, myoblastic or osteoblastic phenotype. In this example, cells in the injectable aggregates may promote the fixation to or rapid integration of the solid cartilage implant into surrounding cartilage, connective tissue, muscle or bone, respectively.

IT **9002-89-5**, Polyvinyl alcohol **9003-01-4**, Poly(acrylic acid) **25322-68-3**, Polyethylene glycol
(microcarriers or scaffolds; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **7647-14-5**, Sodium chloride, biological studies
(physiol. solns.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

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IT **9002-89-5**, Polyvinyl alcohol **9003-01-4**, Poly(acrylic acid) **25322-68-3**, Polyethylene glycol
(microcarriers or scaffolds; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **7647-14-5**, Sodium chloride, biological studies
(physiol. solns.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

L192 ANSWER 38 OF 39 USPATFULL on STN
ACCESSION NUMBER: 2001:237496 USPATFULL
TITLE: TREATING TRAUMATIC BURNS OR BLISTERS OF THE SKIN
INVENTOR(S): HYMES, ALAN C., MOUNT VERNON, WA, United States
NICHOLS, JANE, BLOOMINGTON, MN, United States

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2001055608 | A1 | 20011227 |
| | US 6348212 | B2 | 20020219 |
| APPLICATION INFO.: | US 1999-314271 | A1 | 19990518 (9) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.O. BOX 2938, MINNEAPOLIS, MN, 55402
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 738
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Blisters of the skin are treated by applying to the skin over the blister a flexible moisture-containing hydrophilic hydrogel patch that includes a backing support such as paper, cloth or plastic and a water-based hydrogel layer applied to the backing. The hydrogel layer comprises a hydrophilic natural or synthetic polymer to provide body dispersed in water and can be a tacky adhesive. The polymer can comprise any high molecular weight hydrophilic carbohydrate such as karaya, cornstarch, or a kelp gel and/or a synthetic hydrophilic polymer such as polyacrylamide or polyacrylic acid. A humectant such as a polyhydric alcohol, keeps the gel layer moist. A solute such as salt, protein, sugar or an alcohol is dissolved in the water in a quantity sufficient to raise the osmotic pressure enough to maintain the hydrogel layer in a hypertonic state with respect to the blister. The hydrogel which hydrates the normally dry upper layer of skin forms a hydrophilic bridge with the patient's skin that allows fluid to be drawn by osmotic pressure from the blister through the normally dry stratum corneum into the patch. In addition, the hydrogel very quickly significantly dimishes the pain secondary to skin burns and blisters.
IT **7647-14-5**, Sodium Chloride, biological studies
(hypertonic polymer-based hydrogel patch for treatment of traumatic burns or blisters)
IT **9002-89-5**, Polyvinyl alcohol **9003-01-4**, Polyacrylic acid
(hypertonic polymer-based hydrogel patch for treatment of traumatic burns or blisters)

L192 ANSWER 39 OF 39 USPATFULL on STN
ACCESSION NUMBER: 2001:229880 USPATFULL
TITLE: Method for composite cell-based implants
INVENTOR(S): Frondoza, Carmelita G., Woodstock, MD, United States
Hungerford, David S., Cockeysville, MD, United States
Shikani, Alan H., Ruxton, MD, United States
Domb, Abraham J., Efrat, Israel

NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 749
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to the culture of cells, and particularly chondrocytes for purpose of tissue replacement. The cells are cultured on polymer constructs. Integren expression is used as a measure of chondrocyte viability. Chondrocytes are obtained from the knee, nose and ankle cartilage. Mechanical strain is used to propagate chondrocytes, chitosan and arabinogalactanchitosan are used as scaffolds. Progenitor, pluripotential, stem and mesenchymal cells are operative in this invention.
IT **9002-89-5**, Polyvinyl alcohol **9003-01-4**, Poly(acrylic acid) **25322-68-3**, Polyethylene glycol
(microcarriers or scaffolds; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)
IT **7647-14-5**, Sodium chloride, biological studies
(physiol. solns.; composite of solid implant and injectable formulation of cells or cell-microcarrier aggregates for tissue repair)

L192 ANSWER 37 OF 39 USPATFULL on STN
ACCESSION NUMBER: 2002:94340 USPATFULL
TITLE: Cell-culture and polymer constructs
INVENTOR(S): Hungerford, David S., Cockeysville, MD, United States
Frondoza, Carmelita G., Woodstock, MD, United States
Sohrabi, Afshin, Columbia, MD, United States
Shikani, Alan H., Ruxton, MD, United States
Domb, Abraham J., Efrat, ISRAEL
PATENT ASSIGNEE(S): Chondros, Inc., Towson, MD, United States (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|---|---|---|---|
| PATENT INFORMATION: | US 6378527 | B1 | 20020430 | |
| APPLICATION INFO.: | US 1999-275319 | | 19990324 | (9) |

| | NUMBER | DATE | |
|---|---|---|---|
| PRIORITY INFORMATION: | US 1998-104842P | 19981020 | (60) |
| | US 1998-81016P | 19980408 | (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: McDermott, Corrine
ASSISTANT EXAMINER: Barrett, Thomas
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1621
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cells grown on a microcarrier are separated from the microcarrier by enzymatically digesting the microcarrier. More specifically, chondrocytes may be grown on dextran microcarrier beadlets and then the beadlets digested using dextranase to separate the chondrocytes from the carrier. Cells can also be grown on chitosan microcarriers to be used for implantation. In addition, cells can be grown on polysaccharide polymers to be used as implant devices. Various polymers serve as scaffolds for cells to be used for implantation. The polymers can be used for cell culture as well as for preparing scaffolds useful for tissue replacement such as cartilage tissue.

L192 ANSWER 35 OF 39 USPATFULL on STN
ACCESSION NUMBER: 2005:305444 USPATFULL
TITLE: Antimicrobial silver hydrogels
INVENTOR(S): Rogozinski, Wallace J., Azusa, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 2005266081 | A1 | 20051201 |
| APPLICATION INFO.: | US 2004-853152 | A1 | 20040526 (10) |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Min, Hsieh & Hack, LLP, c/o PortfoliolP, P.O. Box 52050, Minneapolis, MN, 55402, US
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 494
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An antimicrobial hydrogel composition contains at least one antimicrobial silver salt; at least one viscosity-enhancing agent chosen from natural clay and synthetic clay; and at least one electrolyte. Methods of making the composition, methods of disinfecting, and methods of treating are also disclosed.
IT **9003-01-4D**, crosslinked
(Carbomer; antimicrobial hydrogels containing silver salts and viscosity enhancing clays and electrolytes)
IT **7647-14-5**, Sodium chloride, biological studies **9003-39-8**
, Polyvinylpyrrolidone
(antimicrobial hydrogels containing silver salts and viscosity enhancing clays and electrolytes)

L192 ANSWER 36 OF 39 USPATFULL on STN
ACCESSION NUMBER: 2003:284727 USPATFULL
TITLE: Cell-culture and polymer constructs
INVENTOR(S): Hungerford, David S., Cockeysville, MD, United States
Frondoza, Carmelita G., Woodstock, MD, United States
Shikani, Alan H., Ruxton, MD, United States
Domb, Abraham J., Efrat, ISRAEL
PATENT ASSIGNEE(S): Johns Hopkins University, Baltimore, MD, United States (U.S. corporation)
Chondros, Inc., Baltimore, MD, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 6637437 | B1 | 20031028 |
| APPLICATION INFO.: | US 2000-712662 | | 20001114 (9) |

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-275319, filed on 24 Mar 1999, now patented, Pat. No. US 6378527

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 1999-165608P | 19991115 (60) |
| | US 1998-104842P | 19981020 (60) |
| | US 1998-81016P | 19980408 (60) |

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: McDermott, Corrine
ASSISTANT EXAMINER: Barrett, Thomas
LEGAL REPRESENTATIVE: Armstrong, Westerman & Hattori, LLP

analyte.
Dwg.0/2
FILE SEGMENT: CPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A05-E02; A05-G01E; A10-D06; A11-B05C; A12-E09; A12-V03C2; B04-C03; B04-L03A; B07-A02B; B10-A07; B10-C04E; B10-E02; B11-C08E3; B12-K04

L192 ANSWER 34 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 1999-539146 [45] WPIDS
DOC. NO. NON-CPI: N1999-399426
DOC. NO. CPI: C1999-157473
TITLE: Self-anchoring cardiac pacemaker lead for placement in a coronary vein to treat congestive heart failure.
DERWENT CLASS: A96 B07 P34 S05
INVENTOR(S): HEIL, R W; TOCKMAN, B A; WESTLUND, R W
PATENT ASSIGNEE(S): (CARD-N) CARDIAC PACEMAKERS INC
COUNTRY COUNT: 1
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| US 5951597 | A | 19990914 | (199945)* | | 4 | A61N001-05 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| US 5951597 | A | US 1998-59786 | 19980414 |

PRIORITY APPLN. INFO: US 1998-59786 19980414
INT. PATENT CLASSIF.:
MAIN: A61N001-05
BASIC ABSTRACT:
US 5951597 A UPAB: 19991103
NOVELTY - Pacemaker lead (10) has a band (22) of water permeable polymeric material containing an osmotically active material that swells when it absorbs water from the blood and anchors the lead in position in the coronary vein (12). The band can be a resorbable polymer attached to the lead by a resorbable adhesive to facilitate removal of the lead.
USE - For treatment of congestive heart failure.
ADVANTAGE - The osmotically active material causes the band to swell to nearly twice its original diameter until it meets the wall of the vein. The vein exerts sufficient pressure to arrest the osmotic process and prevent further expansion.
DESCRIPTION OF DRAWING(S) - The drawing is a partial cross section view of a vein with the lead anchored therein.
Pacemaker lead 10
Coronary vein 12
Swellable polymer band 22
Dwg.2/2
FILE SEGMENT: CPI EPI GMPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: A12-V02; B04-C03; B05-A01A; B05-A01B; B05-B02A3; B05-C07; B07-A02; B11-C04; B14-F01B
EPI: S05-A02A

(ii) activating the sensor element to provide the electrical current to polymerize the compound on the reactive face of the sensor element, thus reducing the presence of the compound in the ICM

(2) forming a permeation selective barrier (PSB) in situ on a reactive face of a sensor element comprising:

(a) formulating an ICM comprising a phenolic compound capable of polymerizing under the influence of an electrical current;

(b) placing the ICM in contact with the reactive face of the sensor element such that when the electric current is flowing to the sensor element, the current flows through the ICM; and

(c) activating the sensor element to provide the electrical current to polymerize the compound on the reactive face of the sensor and form a PSB;

(3) a collection assembly for use in a sampling system comprising a collection insert layer (CIL) containing an ICM which comprises a compound that will polymerize on a reactive face of a sensor element placed in working relationship with the ICM;

(4) an autosensor assembly for use in a sampling system comprising:

(a) a CIL comprising an ICM, an enzyme capable of reacting with an analyte to produce hydrogen peroxide, and a phenolic compound that will polymerize under an electric current; and

(b) a sensor element in operative contact with the CIL, where the sensor element reacts electrochemically with the phenolic compound to provide a selectively permeable barrier at an interface between the sensor element and the CIL;

(5) a **hydrogel** comprising:

(a) a hydrophilic compound which forms a gel in the presence of water, and is present at 4 % or more by weight based on the total weight of the **hydrogel**;

(b) 95 % or less water based on the total weight of the **hydrogel**;

(c) an **electrolyte**, where the background electrical signal in the gel is at most 200 nA;

(d) an enzyme composition; and

(e) a biocide;

(6) a **hydrogel** as in (5) where the enzyme composition comprises glucose oxidase;

(7) electroosmotically extracting glucose through the surface of the skin of a subject and into a **hydrogel** comprising:

(a) applying a device comprising a **hydrogel** as in (6), the **hydrogel** being in contact with an electrode, to the skin of the subject; and

(b) generating an electrical current that moves the glucose through the skin and into the **hydrogel**;

(8) detecting an amount of glucose in a subject comprising:

(a) extracting glucose through a skin surface of the subject using a device comprising a **hydrogel** as in (6) in contact with an electrode;

(b) generating an electrical current that moves the glucose through the skin and into the **hydrogel**;

(c) detecting the amount of glucose present in the **hydrogel** ; and

(d) relating the amount of glucose in the **hydrogel** to the amount of glucose in the subject.

USE - The methods are used for reducing the level of interferants in the detection of analytes (claimed). A hydrogel and autosensor can be used for detection of analytes, such as blood glucose or a drug or pharmacological agent.

ADVANTAGE - The compositions can provide for the efficient reduction of interfering species while maintaining efficient detection of an

| | | | | |
|---|---|---|---|---|
| JP 2002542498 | W | | JP 2000-613520 | 20000421 |
| | | | WO 2000-US10836 | 20000421 |
| US 6615078 | B1 | Provisional | US 1999-130729P | 19990422 |
| | | Provisional | US 1999-149513P | 19990817 |
| | | | US 2000-556486 | 20000421 |
| US 2003199745 | A1 | Provisional | US 1999-130729P | 19990422 |
| | | Provisional | US 1999-149513P | 19990817 |
| | | Cont of | US 2000-556486 | 20000421 |
| | | | US 2003-438239 | 20030514 |
| US 6902905 | B2 | Provisional | US 1999-130729P | 19990422 |
| | | Provisional | US 1999-149513P | 19990817 |
| | | Cont of | US 2000-556486 | 20000421 |
| | | | US 2003-438239 | 20030514 |
| US 2005170448 | A1 | Provisional | US 1999-130729P | 19990422 |
| | | Provisional | US 1999-149513P | 19990817 |
| | | Cont of | US 2000-556486 | 20000421 |
| | | Div ex | US 2003-438239 | 20030514 |
| | | | US 2005-60524 | 20050217 |

FILING DETAILS:

| PATENT NO | KIND | | PATENT NO |
|---|---|---|---|
| EP 1064046 | A1 | Based on | WO 2000064533 |
| JP 2002542498 | W | Based on | WO 2000064533 |
| US 2003199745 | A1 | Cont of | US 6615078 |
| US 6902905 | B2 | Cont of | US 6615078 |
| US 2005170448 | A1 | Cont of | US 6615078 |
| | | Div ex | US 6902905 |

PRIORITY APPLN. INFO: US 1999-149513P 19990817; US
1999-130729P 19990422; US
2000-556486 20000421; US
2003-438239 20030514; US
2005-60524 20050217

INT. PATENT CLASSIF.:
MAIN: A61B005-00; A61N001-30; C12Q001-54; G01N027-327
SECONDARY: A01N025-04; A01N029-04; G01N001-10; G01N001-28; G01N027-416; G01N033-66
ADDITIONAL: A61L002-16; A61L002-18; B01D067-00; G01N027-28

BASIC ABSTRACT:

WO 200064533 A UPAB: 20010124

NOVELTY - Methods for reducing the level of interferants in the detection of analytes comprise selectively adsorbing the compound or polymerizing the compound at a reactive face of a sensor .

DETAILED DESCRIPTION - A novel method of reducing a presence of a compound in an ionically conductive material (ICM), where the presence of the compound interferes with detecting an analyte in the material, comprises placing the ICM comprising the compound in contact with at least one component of a device capable of detecting the analyte where the component is partially permeable to the compound, to allow the compound to migrate out of the ICM and into the component, thus reducing the presence of the compound in the ICM.

INDEPENDENT CLAIMS are also included for the following:

(1) reducing a presence of a compound in an ICM where the presence of the compound interferes with detecting an analyte in the material, comprising placing the ICM comprising:

(i) the compound in contact with a reactive face of a sensor element such that, when an electric current is flowing to the sensor element, the current flows through the ICM; and

excavation or void volume to increase drug dosages, optimizes the uniform delivery and consistent distribution of therapeutic agents to large, small, irregularly shaped compartments and to allow easy injection, placement or surgical implantation. It is malleable and can be delivered and manipulated within an implant site to conform and adhere to the contours, thus ensuring therapeutic distribution and uniform therapeutic delivery throughout the resection walls of the pockets and thus further providing increased flexibility with therapeutic dosages. It reduces edema, inflammation and the unwanted loss or migration of body fluid(s). It also facilitates a very high, localized concentration of antibiotics. It resists microbial growth within or upon exposure to microbial challenges. It is formulated with a low aqueous or semi-polar solvent content to provide a formulation which facilitates hestasis.

The formulation is exposed to or in direct contact with a high aqueous content environment, such as blood or lymph, creates a zone of contact between the formulation and the environment, thus the zone hydrates and forms a solid cubic phase.

Dwg.0/5

FILE SEGMENT: CPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A12-V01; B01-D02; B04-B01B; B04-C02A; B04-C03B; B04-C03C; B04-N02; B07-A02; B10-A03; B10-C04E; B10-E04C; B10-G02; B11-C04A; B12-M11E; B14-H01; B14-N16; B14-N17B

L192 ANSWER 33 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-040828 [05] WPIDS
DOC. NO. NON-CPI: N2001-030472
DOC. NO. CPI: C2001-011773
TITLE: Reducing presence of compound in ionically conductive material for detection of analytes, such as blood glucose, comprises selectively adsorbing compound or polymerizing the compound at reactive face of sensor.
DERWENT CLASS: A96 B04 P34
INVENTOR(S): BURSON, K K; PUDLO, J; REIDY, M; SONI, P L; UHEGBU, C; VAN WYHE, M; VIJAYAKUMAR, P; SONI, P; VUAYAKUMAR, P
PATENT ASSIGNEE(S): (CYGN-N) CYGNUS INC
COUNTRY COUNT: 23
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| WO 2000064533 | A1 | 20001102 | (200105)* | EN | 59 | A61N001-30 |
| RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE | | | | | | |
| W: CA JP KR | | | | | | |
| EP 1064046 | A1 | 20010103 | (200107) | EN | | A61N001-30 |
| R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE | | | | | | |
| JP 2002542498 | W | 20021210 | (200301) | | 76 | G01N027-327 |
| US 6615078 | B1 | 20030902 | (200359) | | | A61N001-30 |
| US 2003199745 | A1 | 20031023 | (200370) | | | A61B005-00 |
| US 6902905 | B2 | 20050607 | (200538) | | | C12Q001-54 |
| US 2005170448 | A1 | 20050804 | (200552) | | | C12Q001-54 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| WO 2000064533 | A1 | WO 2000-US10836 | 20000421 |
| EP 1064046 | A1 | EP 2000-926256 | 20000421 |
| | | WO 2000-US10836 | 20000421 |

producing a therapeutic agent/semisolid product; and

(b) melting the product where the semisolid solubilizes the therapeutic agent to form semisolid having a viscosity that is slightly decreased with respect to the semisolid alone, thus facilitating easier manipulation of the resulting semisolid;

(2) A method of incorporating a hydrophilic therapeutic agent(s) into a semisolid, comprising:

(a) melting the semisolid;

(b) combining the therapeutic agent with warm aqueous component;

(c) heating the therapeutic agent/aqueous component combination; and

(d) combining the component combination with melted semisolid to form a malleable semisolid;

(3) A method of producing an alternative semisolid, comprising:

(a) melting a glyceryl monooleate (GMO);

(b) combining a hydrophilic surfactant with water;

(c) heating and stirring hydrophilic surfactant/water combination to produce a spreadable paste; and

(d) combining the paste with melted GMO to form an alternative cubic phase gel possessing high viscosity;

(4) A method of altering an aqueous buffer, comprising:

(a) placing approx. 6.25-12.5 weight% hydrolyzed gelatin in approx. 93.75-87.5 weight% aqueous buffer, thus producing a hydrolyzed gelatin/aqueous buffer combination;

(b) heating and stirring the combination which produces a thick gelatinous substance; and

(c) combining the substance with GMO to form a product that swells and forms a highly viscous, translucent gel that is less malleable with regard to GMO alone; and

(5) A method of producing poly(lactic-co-glycolide) polymer microsphere for incorporation into semisolid, comprising:

(a) dissolving desired therapeutic agent and the poly(lactic-co-glycolide) polymer in a solvent;

(b) transferring the therapeutic agent, the poly(lactic-co-glycolide) polymer, and the solvent to an aqueous buffer having an emulsifying agent in a ratio of 1.5:1 - 2-1 (aqueous buffer:polymer solution), thus forming small droplets or microspheres;

(c) agitating the microspheres for 15-30 minutes at room temperature; increasing the temperature to approx. 40-45 deg. C and continuing agitation for 90-115 minutes;

(d) removing the microspheres from heat and agitation, collecting the microspheres by filtration, and washing the microspheres with distilled water;

(e) collecting the microspheres in a container, flash freezing the microspheres to neg. 70 deg. C and drying in a lyophilizer at neg. 40 deg. C for 48 hours; and

(f) incorporating the microspheres into the semisolid.

ACTIVITY - Antiulcer; Cerebroprotective.

No biological data available.

USE - The system is used for delivering of therapeutic agents to pathological conditions of skin or superficial structures of the body, e.g. decubitus ulcers and surgical sound infections.

It may be incorporated with a neuroprotective agent for implantation or injection in the body at a time of post-operative evacuation of a hematoma resulting from stroke to alleviate neutral damage associated with a residual clot.

It can also be incorporated with biologically-active agents, drugs, medicaments, inactives, other therapeutic agents, and/or chemically modified equivalents for providing a local or systemic biological, physiological or therapeutic effect in the body (all claimed).

ADVANTAGE - The invention efficiently utilizes the entire cavity,

wetting becomes slippery, thus the device can be more easily inserted into veins, arteries and other passage ways causing minimal tissue damage.
Dwg.0/8

FILE SEGMENT: CPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A09-A; A10-E10; A10-E22; A10-E23; A12-V02; A12-V03; D09-C01C; E05-E; E05-M; E10-A04B; E10-A04B1B; E10-A23B; E10-E04M1; E10-F02A2

L192 ANSWER 32 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-352111 [33] WPIDS
DOC. NO. NON-CPI: N2003-281201
DOC. NO. CPI: C2003-092670
TITLE: Semisolid and/or multiparticulate therapeutic delivery system, useful for delivering therapeutic agents to body tissues, comprises heterogeneous system that utilizes biocompatible, biodegradable microspheres dispersed in semisolid.
DERWENT CLASS: A96 B05 B07 P32
INVENTOR(S): JONES, C E; KENNEDY, J P
PATENT ASSIGNEE(S): (JONE-I) JONES C E; (KENN-I) KENNEDY J P
COUNTRY COUNT: 1
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| US 6488952 | B1 | 20021203 | (200333)* | | 14 | A61F002-02 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| US 6488952 | B1 | US 2001-941378 | 20010828 |

PRIORITY APPLN. INFO: US 2001-941378 20010828
INT. PATENT CLASSIF.:
MAIN: A61F002-02
SECONDARY: A61K009-50
BASIC ABSTRACT:
US 6488952 B UPAB: 20030526
NOVELTY - A semisolid and/or multiparticulate therapeutic delivery system, comprises a heterogeneous system that utilizes biocompatible, biodegradable microspheres dispersed in semisolid delivery system for injection, placement or implantation within the body to facilitate local or systemic release of therapeutic agent(s).

DETAILED DESCRIPTION - Semisolid and/or multiparticulate therapeutic delivery system, comprises a biodegradable, biocompatible semisolid delivery system that is designed for injection, depositing, or implantation within or upon a body to provide local therapeutic effects, facilitate a local or systematic release of therapeutic agent(s) in or on the body.

It has a biodegradable, biocompatible combination semisolid, multiparticulate delivery system that is defined as a biocompatible, biodegradable material having multiparticulate(s) dispersed within a viscous semisolid.

INDEPENDENT CLAIMS are included for the following:

(1) A method of incorporating a lipophilic therapeutic agent(s) into a semisolid, comprising:

(a) combining the therapeutic agent with the semisolid, thus

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| WO 2002070022 | A2 | WO 2002-CA246 | 20020226 |
| US 2002161065 | A1 Provisional | US 2001-271702P | 20010228 |
| | | US 2002-83737 | 20020227 |
| EP 1363684 | A2 | EP 2002-702198 | 20020226 |
| | | WO 2002-CA246 | 20020226 |
| US 2004086568 | A1 | WO 2002-CA246 | 20020226 |
| | | US 2004-468438 | 20040105 |
| AU 2002235694 | A1 | AU 2002-235694 | 20020226 |
| JP 2004528418 | W | JP 2002-569193 | 20020226 |
| | | WO 2002-CA246 | 20020226 |
| US 6808738 | B2 Provisional | US 2001-271702P | 20010228 |
| | | US 2002-83737 | 20020227 |
| EP 1363684 | B1 | EP 2002-702198 | 20020226 |
| | | WO 2002-CA246 | 20020226 |
| DE 60201889 | E | DE 2002-00201889 | 20020226 |
| | | EP 2002-702198 | 20020226 |
| | | WO 2002-CA246 | 20020226 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|---|---|---|
| EP 1363684 | A2 Based on | WO 2002070022 |
| AU 2002235694 | A1 Based on | WO 2002070022 |
| JP 2004528418 | W Based on | WO 2002070022 |
| EP 1363684 | B1 Based on | WO 2002070022 |
| DE 60201889 | E Based on | EP 1363684 |
| | Based on | WO 2002070022 |

PRIORITY APPLN. INFO: US 2001-271702P 20010228; US 2002-83737 20020227; US 2004-468438 20040105

INT. PATENT CLASSIF.:

MAIN: A61K033-38; A61L000-00; A61L027-44; C08G002-00; C08J007-04; C08J007-18

SECONDARY: A61K009-14; A61L015-16; A61L027-00; A61L029-00; A61L031-00; B05D003-00; C08J007-06; C09D133-04

BASIC ABSTRACT:

WO 200270022 A UPAB: 20021212

NOVELTY - Providing coated devices having high friction surfaces when dry but upon wetting the device becomes slippery and can be more rapidly inserted into veins, arteries and other passageways causing minimal tissue damage.

DETAILED DESCRIPTION - A modified surface is formed on a polymeric material, by incubating photoinitiator coated polymeric material with an aqueous momomer capable of free radical polymerisation, and exposing the incubated polymeric material to UV light.

An INDEPENDENT CLAIM is included for a polymeric composite comprising a polymeric body having a stable **polyacrylate** modified surface, which is hydrophilic, lubricious, and antimicrobial.

USE - For fabricating various types of in-dwelling devices, such as implants, catheters, stents, wound dressing, cardiac valves, pins, clips, clamps, and tubings.

ADVANTAGE - The method for making modified surface on a polymeric material is mild, efficient and effective. The method conveniently loads a great amount of silver so that it can be released for a long and effective period of time. The coated device have high friction surfaces, which upon

KR2004075301 A UPAB: 20050217
NOVELTY - A method for storing **hydrogel** for a bio-sensor or drug delivery system is provided to improve chemical and physical characteristics without changing activation of enzyme.
DETAILED DESCRIPTION - A method for storing **hydrogel** for a bio-sensor or drug delivery system is provided to improve chemical and physical characteristics without changing activation of enzyme. A **hydrogel** containing **poly ethylene oxide**, **poly acrylic acid**, **poly vinyl alcohol**, poly acryl amido methyl propane sulfonate, poly methylene glycol, chitosan, or glucose oxidase is vacuum-dried at 100 deg. C or lower. The dried **hydrogel** is kept in a desiccator for a predetermined period. Then, the dried **hydrogel** is expanded in a PBS (**Phosphate Buffer** Saline) solution. The expanded **hydrogel** is used as **electrolyte** of a bio-sensor and a drug delivery system.
Dwg.0/10

FILE SEGMENT: CPI GMPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A12-V03C2; B04-C01; B04-C02; B04-C03; B11-C06; B11-C08; B11-C09; B12-K04

L192 ANSWER 31 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-740750 [80] WPIDS
DOC. NO. NON-CPI: N2002-583628
DOC. NO. CPI: C2002-209726
TITLE: Formation of modified surface on polymeric material, for use in fabricating implants e.g. stents, involves incubating photo-initiator coated polymeric material (PM) with aqueous monomer and exposing PM to UV light.
DERWENT CLASS: A35 A96 D22 E19 P34
INVENTOR(S): DITIZIO, V; FRANK, D; DICOSMO, F
PATENT ASSIGNEE(S): (UROT-N) UROTEQ INC; (DITI-I) DITIZIO V; (FRAN-I) FRANK D; (DICO-I) DICOSMO F
COUNTRY COUNT: 101
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| WO 2002070022 | A2 | 20020912 | (200280)* | EN | 37 | A61L000-00 |
| RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW | | | | | | |
| W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW | | | | | | |
| US 2002161065 | A1 | 20021031 | (200280) | | | C08G002-00 |
| EP 1363684 | A2 | 20031126 | (200380) | EN | | A61L027-44 |
| R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR | | | | | | |
| US 2004086568 | A1 | 20040506 | (200430) | | | A61K033-38 |
| AU 2002235694 | A1 | 20020919 | (200433) | | | A61L000-00 |
| JP 2004528418 | W | 20040916 | (200461) | | 66 | C08J007-18 |
| US 6808738 | B2 | 20041026 | (200470) | | | C08J007-04 |
| EP 1363684 | B1 | 20041110 | (200473) | EN | | A61L027-44 |
| R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR | | | | | | |
| DE 60201889 | E | 20041216 | (200482) | | | A61L027-44 |

APPLICATION DETAILS:

US 2004212130 A1 Cont of US 6783721

PRIORITY APPLN. INFO: US 2001-20389 20011030; US 2004-847077 20040517
INT. PATENT CLASSIF.:
MAIN: B29C045-00
SECONDARY: B29C071-00; B29C071-04
BASIC ABSTRACT:
US2004212130 A UPAB: 20041112
NOVELTY - High strength **hydrogel** medical implant is produced by:
(A) injecting a polymer solution into a mold;
(B) causing the molded solution to gel by physically crosslinking the solution;
(C) adjusting the equilibrium **hydrogel** crystallinity to insure that the swelling pressure of the **hydrogel** remains stable after implantation by washing the molded gel in a physiologic solution;
(D) dehydrating the molded gel; and
(E) packaging the implant.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a process for treating a **hydrogel** comprising forming a **hydrogel** from a polymer solution.
USE - For producing high strength **hydrogel** medical implant (claimed), i.e. prosthetic intervertebral disc nucleus.
ADVANTAGE - The resulting **hydrogel** medical implant exhibits a stable swelling pressure characteristic after the implantation, i.e. water content change with respect to applied profile.
DESCRIPTION OF DRAWING(S) - The figure is a process flow chart for forming the spinal nucleus.
Dwg.3/4
FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI
MANUAL CODES: CPI: A11-B12A; A12-V02; D09-C01D

L192 ANSWER 30 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-096765 [11] WPIDS
DOC. NO. CPI: C2005-032552
TITLE: Method for storing **hydrogel** for bio-sensor or drug delivery system.
DERWENT CLASS: A96 B04 B07 P34
INVENTOR(S): JUNG, H S; KIM, H C; KIM, H S; LEE, D H; SONG, J H; YOON, S H
PATENT ASSIGNEE(S): (TFOU-N) T4M
COUNTRY COUNT: 1
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| KR 2004075301 | A | 20040827 | (200511)* | | 1 | A61L015-60 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| KR 2004075301 | A | KR 2004-58952 | 20040727 |

PRIORITY APPLN. INFO: KR 2004-58952 20040727
INT. PATENT CLASSIF.:
MAIN: A61L015-60
BASIC ABSTRACT:

MAIN: A61K009-32; A61K031-00

BASIC ABSTRACT:

WO2004108117 A UPAB: 20050126

NOVELTY - Extended release osmo microsealed formulation (A) comprises an inner solid osmo-microsealed particulate phase (I) (consisting venlafaxine active or its salt, at least one osmogen/osmotic agent/osmo polymer, diluent, binder and hydrophobic polymer membrane forming the core); an outer solid continuous phase (II) (consisting hydrophilic water soluble and/or swellable polymer), compressed into tablets and optionally coated with a functional coat.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for preparation of (A).

ACTIVITY - Antidepressant.

MECHANISM OF ACTION - None given.

USE - (A) is useful for the treatment of depression.

ADVANTAGE - (A) controls the side effects e.g. nausea and vomiting and (I) has increased bioavailability. The bioavailability of (I) (venlafaxine) was tested using biological assays. The results showed that the extended release of (I) in plasma level was 20 ng/ml at 35 minutes.

Dwg.0/3

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A12-V01; B04-A08C; B04-A10F; B04-B01C1; B04-B04D2; B04-C02; B04-C03; B04-N02; B05-A01A; B05-A01B; B05-B02A3; B05-B02C; B05-C04; B05-C05; B05-C07; B07-A02; B10-A07A; B10-A07B; B10-A13C; B10-B03B; B10-C02; B10-C04; B10-C04E; B10-E04C; B11-C09; B12-M10A3; B12-M11B; B12-M11K; B12-M12N; B14-J01A1; B14-S08

L192 ANSWER 29 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-747480 [73] WPIDS
CROSS REFERENCE: 2003-541160 [51]
DOC. NO. CPI: C2004-262620
TITLE: Production of high strength **hydrogel** medical implant involves adjusting equilibrium **hydrogel** crystallinity by washing molded gel in physiologic solution to insure that the swelling pressure of the **hydrogel** remains stable after implantation.
DERWENT CLASS: A32 A96
INVENTOR(S): HIGHAM, P; LAPSZYNSKI, J; NGO, C; WILLIAMS, P F
PATENT ASSIGNEE(S): (HOWN) HOWMEDICA OSTEONICS CORP
COUNTRY COUNT: 1
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| US 2004212130 | A1 | 20041028 | (200473)* | | 10 | B29C045-00 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| US 2004212130 | A1 Cont of | US 2001-20389 | 20011030 |
| | | US 2004-847077 | 20040517 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|---|---|---|

USE - For the preparation of a wear resistant **hydrogel**; for preparation of a prosthetic **hydrogel** implant for use in high wear applications (claimed); as a prosthetic implant such as for cartilage; in biomedical applications such as contact lenses and spinal implants; for drug delivery into the disc due to their capability for controlled release of drugs.

ADVANTAGE - The prepared **hydrogel** is biocompatible as hydrophobic elastomers and metals. This biocompatibility is due to unique characteristics of **hydrogels** in that they are soft and contain water like the surrounding tissues and have relatively low frictional coefficients with respect to the surrounding tissues. The biocompatibility of **hydrogels** results in prosthetic nuclei which are more easily tolerated in the body. The hydrophobic elastomeric and metallic gels do not permit diffusion of aqueous compositions, and their solutes through it. The prepared **hydrogels** has permeability to water and water-soluble substances, such as nutrients, metabolites. The prepared **hydrogels** maintains dimensional integrity having a water content of up to 90%.

Dwg.0/7

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A08-C01; A10-E09B2; A11-C02B; A12-V02; D09-C01A; D09-C01D

L192 ANSWER 28 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-057547 [06] WPIDS
DOC. NO. CPI: C2005-019775
TITLE: Extended release osmo microsealed formulation, useful to treat depression, comprises an inner solid osmo-microsealed particulate phase, an outer solid continuous phase, compressed into tablets and optionally coated with a functional coat.
DERWENT CLASS: A96 B05
INVENTOR(S): BHATTACHARYA, S; JOSHI, M; VELLI, S G; GUMMUDAVELLI, S
PATENT ASSIGNEE(S): (ALEM-N) ALEMBIC LTD
COUNTRY COUNT: 108
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| WO 2004108117 | A2 | 20041216 | (200506)* | EN | 38 | A61K009-32 |
| RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW | | | | | | |
| W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW | | | | | | |
| IN 2002000504 | I3 | 20050513 | (200572) | EN | | A61K031-00 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| WO 2004108117 | A2 | WO 2004-IN133 | 20040514 |
| IN 2002000504 | I3 | IN 2002-MU504 | 20020605 |

PRIORITY APPLN. INFO: IN 2002-MU504 20030605
INT. PATENT CLASSIF.:

organic solvent; cooling, dehydration, irradiation, treatment and rehydration steps.

DERWENT CLASS: A14 A32 A96 D22
INVENTOR(S): DEMARIA, C; NGO, C; WILLIAMS, P F
PATENT ASSIGNEE(S): (HOWN) HOWMEDICA OSTEONICS CORP
COUNTRY COUNT: 1
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| US 2005236742 | A1 | 20051027 | (200579)* | | 11 | B29C045-00 |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| US 2005236742 | A1 | US 2004-832852 | 20040427 |

PRIORITY APPLN. INFO: US 2004-832852 20040427
INT. PATENT CLASSIF.:
MAIN: B29C045-00
BASIC ABSTRACT:
US2005236742 A UPAB: 20051208
NOVELTY - Preparation (M1) of a wear resistant **hydrogel** involves: forming a solution of **poly (vinyl alcohol)** polymer in a solvent made from water and an organic solvent; cooling the solution to below 0 deg. C to form the **hydrogel**; dehydrating the **hydrogel**; irradiating the dehydrated **hydrogel**; treating the surface of the dehydrated irradiated **hydrogel** with a solution containing a cross-linking agent; and rehydrating the **hydrogel.**

DETAILED DESCRIPTION - Preparation (M1) of a wear resistant **hydrogel** involves:

(1) forming a solution of **poly (vinyl alcohol)** polymer in a solvent made from water and an organic solvent;

(2) cooling the solution to below 0 deg. C to form the **hydrogel**;

(3) dehydrating the **hydrogel**;

(4) irradiating the dehydrated **hydrogel** in an oxygen reduced atmosphere;

(5) treating the surface of the dehydrated irradiated **hydrogel** with a solution containing a cross-linking agent selected from boric acid and glutaraldehyde; and

(6) rehydrating the **hydrogel.**

An INDEPENDENT CLAIM is included for preparation of a prosthetic **hydrogel** implant for use in high wear applications involving:

(A) forming solution of **polyvinyl alcohol** (5 - 20%) in a DMSO/water solvent;

(B) forming a **hydrogel** by gelating the solution in a mold by holding the solution for 2 - 24 hours at at most 4 deg. C;

(C) rinsing the **hydrogel** in a solution of **sodium chloride, phosphate buffer** and **potassium** carbonate;

(D) dehydrating the **hydrogel** to water (20 - 70%);

(E) irradiating the dehydrated **hydrogel** with gamma irradiation of 100 kGy and dehydrating the **hydrogel**; and

(F) cross-linking the surface of the dehydrated **hydrogel** with a boric acid solution.

INT. PATENT CLASSIF.:
MAIN: A61K009-16
SECONDARY: A61J007-00; A61K031-167; A61K031-192; A61K031-4415; A61K033-26

BASIC ABSTRACT:

WO2005107713 A UPAB: 20051216

NOVELTY - A pharmaceutical composition comprises at least one active substance and a gellan gum arranged in a configuration allowing optimal water diffusion so that upon addition of a predetermined amount of an aqueous medium, without the necessity of applying shear forces or other mixing forces, within at most 5 minutes.

DETAILED DESCRIPTION - A pharmaceutical composition comprises at least one active substance and a gellan gum arranged in a configuration allowing optimal water diffusion so that upon addition of a predetermined amount of an aqueous medium, without the necessity of applying shear forces or other mixing forces, within at most 5 minutes the composition swells and gels to a viscosity of at least 10,000cps as measured by a Brookfield viscometer.

INDEPENDENT CLAIMS are included for the following:

(A) a vehicle for oral administration of at least one active substance comprising a gellan gum arranged in a configuration allowing the optimal water diffusion;

(B) a dispensing unit comprising the pharmaceutical composition; and

(C) preparation of the pharmaceutical composition involving blending the dry components to a homogeneous mixture and optionally granulating the mixture with a binder.

ACTIVITY - Respiratory-Gen.; Antihistamine; Antidepressant; Antipyretic.

MECHANISM OF ACTION - Gene Therapy.

USE - For oral administration of at least one active substance (claimed) e.g. respiratory drugs, antihistamines, antidepressants, antipyretics, genetic materials, etc..

ADVANTAGE - The composition allows optimal water diffusion so that upon addition of a predetermined amount of an aqueous medium, without the necessity of applying shear forces or other mixing forces, within at most 5 minutes. The composition swells and/or gels and the texture of the swelled composition is similar to that of a soft pudding and having a viscosity of at least about 10000 cps as measured by a Brookfield Viscometer with a #4 LV spindle at 6 revolutions per minute and at 20 - 25 deg. C; is water free dosage from; has a sensory-acceptable mouth-feel and test; and provides controlled-release of drug substances. The composition passes the drop down test.

Dwg.0/10

FILE SEGMENT: CPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: A12-V01; B04-C02A; B04-C02B; B04-C02D; B04-C02E; B04-C03; B04-D01; B05-A01A; B05-A01B; B05-B02A3; B05-B02C; B05-C01; B05-C04; B05-C05; B05-C07; B05-C08; B07-A02; B07-A02B; B10-A07; B10-A07A; B10-A07B; B10-A09A; B10-A13C; B10-B03B; B10-C02; B10-C04C; B10-C04D; B10-E04C; B11-C06; B12-M10A4; B12-M11D; B12-M11L; B12-M12N; B14-C04; B14-J01A1; B14-K01; B14-L09; B14-S03

L192 ANSWER 27 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-777368 [79] WPIDS
DOC. NO. CPI: C2005-238159
TITLE: Preparation of wear resistant **hydrogel** useful as prosthetic implant involves forming solution of poly(vinylalcohol) polymer in solvent made from water and

**alcohol**) in 100mM-citrate buffer of pH 4. A 20 µl portion of the solution was dropped onto a 3 mm diameter glassy C disc electrode and after 30 min the film was crosslinked with 10 µl 2.5% glutaraldehyde for 40 min to 1 h. The coating procedure was repeated and, in the dark, the electrode was immersed in 0.1-10mM-phenazine methosulfate as mediator for 20 min and H2O for 1 h. The sensor was used for the mediated enzymic oxidation amperometric determination of 0.5-3.5mM-**glucose** at 0 V vs. SCE using a Pt-wire counter electrode and 50mM-Tris hydrochloride buffer of pH 7 containing 50mM-KCl as supporting **electrolyte.** The diffusion characteristics of the cationic redox couples methyl viologen and ruthenium(III) hexa-amine and the electrochemistry of phenazine methosulfate incorporated into enzyme-free films were studied. The enzyme-free films were more resistant to protein adsorption than cellulose acetate or polycarbonate films.

CC *F Clinical and Biochemical Analysis (30000)
A General Analytical Chemistry

IT Analyte(s):
50-99-7, **glucose**
(detection of, biosensors for)
Concepts:
biosensors
(for **glucose, poly(vinyl alcohol**
)-Nafion membrane)

L192 ANSWER 26 OF 39 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-797111 [81] WPIDS
DOC. NO. NON-CPI: N2005-660372
DOC. NO. CPI: C2005-245667
TITLE: Pharmaceutical composition useful for oral administration of active substance e.g. respiratory drugs comprises the active substance and gellan gum.
DERWENT CLASS: A96 B07 P33
INVENTOR(S): BAR-SHALOM, D; FISCHER, G; HEMMINGSEN, P H; SLOT, L
PATENT ASSIGNEE(S): (EGAL-N) EGALET AS
COUNTRY COUNT: 111
PATENT INFORMATION:

| PATENT NO | KIND | DATE | WEEK | LA | PG | MAIN IPC |
|---|---|---|---|---|---|---|
| WO 2005107713 | A2 | 20051117 | (200581)* | EN | 105 | A61K009-16 |

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---|---|---|---|
| WO 2005107713 | A2 | WO 2005-DK317 | 20050511 |

PRIORITY APPLN. INFO: DK 2004-755 20040511

AUTHOR: Venkatesh S.; Hodgin L.; Hanson P.; Suryanarayanan R.
CORPORATE SOURCE: College of Pharmacy, University of Minnesota, 308 Harvard Street S.E.,Minneapolis, MN 55455, United States.
SOURCE: Journal of Controlled Release, (1992), 18/1 (13-18)
CODEN: JCREEC ISSN: 0168-3659
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: **Hydrogel** patch formulations containing 15% and 21% w/w salicylic acid (SA) are commercially available for the treatment of warts. The release of SA from these formulations was monitored by a procedure reported for in vitro evaluation of **transdermal** dosage forms (Shah et al., Int. J. Pharm., 32 (1986) 243-250). The studies were carried out on 3 formulations. The appropriate number of patches of each formulation were placed on a watch glass and covered with an aluminium wire screen. **Phosphate buffer** (pH 7.4) maintained at 32°C was the release medium. HPLC analyses of the release medium revealed that complete release of SA from all the formulations occurred in <= 8 h. Plots of the fraction of incorporated drug released (up to the release of .sim. 60% of the incorporated drug) as a function of square root of time were linear indicating matrix diffusion controlled release mechanism. Storage of the packaged formulations under ambient conditions for 9 months caused no change in the rate and extent of SA release. This technique has potential utility as a quality assurance test for these formulations.
CONTROLLED TERM: *salicylic acid; *drug formulation; *drug release; * **hydrogel**; karaya gum; macrogol; propylene glycol; quaternium 15; article; controlled study; high performance liquid chromatography; priority journal; quality control; storage; pharmaceutics
CAS REGISTRY NUMBER: (salicylic acid) 63-36-5, 69-72-7; (karaya gum) 9000-36-6; (macrogol) **25322-68-3**; (propylene glycol) 57-55-6; (quaternium 15) 4080-31-3, 51229-78-8
CHEMICAL NAME: Drug Trade Name: dowicil 200
CORPORATE NAME: Drug Manufacturer: dow, United States; union carbide, United States

L192 ANSWER 25 OF 39 ANABSTR COPYRIGHT 2006 RSC on STN
AN 59(9):F63 ANABSTR
TI Redox reactions in the presence of an ion-exchange - **hydrogel** composite film.
AU Somasundrum, M.; Bannister, J. V. (School Bioresources and Technol., King Mongkut's Inst. Technol., Thonburi, Bangkok 10140, Thailand)
SO Electroanalysis (N. Y.) (1997) 9(1), 56-62
CODEN: ELANEU ISSN: 1040-0397
DT Journal
LA English
AB A **glucose** biosensor was prepared from a solution of 25 mg/ml **glucose** oxidase/1% Nafion/1% **poly(vinyl**

A and M University, College Station, TX 77843-3122, United States.
E-mail: pishko@tamu.edu
SOURCE: Analytical Chemistry, (1999), 71/15 (3126-3132)
CODEN: ANCHAM ISSN: 0003-2700
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: A fluorescence biosensor is described that is based on a photopolymerized poly(ethylene glycol) (PEG) **hydrogel** incorporating fluorescein isothiocyanate dextran (FITC-dextran) and tetramethylrhodamine isothiocyanate concanavalin A (TRITC-Con A) chemically conjugated into the **hydrogel** network using an α-acryloyl, ω-N-hydroxysuccinimidyl ester of PEG- propionic acid. In the absence of **glucose**, TRITC-Con A binds with FITC- dextran, and the FITC fluorescence is quenched through fluorescence resonance energy transfer. Competitive **glucose** binding to TRITC-Con A liberates FITC- dextran, resulting in increased FITC fluorescence proportional to the **glucose** concentration. In vitro experiments of **hydrogel** spheres in a solution of 0.1 M phosphate-buffered saline (pH 7.2) and **glucose** were conducted for multiple TRITC-Con A/FITC-dextran ratios. **Hydrogels** were characterized on the basis of the percent change in fluorescence intensity when FITC-dextran was liberated by increasing **glucose** concentrations. The optimum fluorescent change between 0 and 800 mg/dL was obtained with a TRITC-Con A/FITC-dextran mass ratio of 500:5 μg/mL PEG. Fluorescent response was linear up to 600 mg/dL. At higher concentrations, the response saturated due to the displacement of the majority of the FITC-dextran and to concentration quenching by free FITC- dextran. Dynamic fluorescent change upon **glucose** addition was .sim.10 min for a **glucose** concentration step change from 0 to 200 mg/dL.
CONTROLLED TERM: *__glucose__; *concanavalin a; *dextran; *macrogol; *fluorescein isothiocyanate dextran; *rhodamine; *biosensor; *fluorescence; *__hydrogel__; phosphate; __sodium chloride__; propionic acid; binding competition; energy transfer; encapsulation; controlled study; article
CAS REGISTRY NUMBER: (__glucose__) 50-99-7, 84778-64-3; (concanavalin a) 11028-71-0; (dextran) 87915-38-6, 9014-78-2; (macrogol) __25322-68-3__; (fluorescein isothiocyanate dextran) 60842-46-8; (phosphate) 14066-19-4, 14265-44-2; (__sodium chloride__) __7647-14-5__; (propionic acid) 72-03-7, 79-09-4

L192 ANSWER 24 OF 39 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1992:22015700 BIOTECHNO
TITLE: In vitro release kinetics of salicylic acid from **hydrogel** patch formulations

ACCESSION NUMBER: 2003:35350833 BIOTECHNO
TITLE: The effect of composition of **poly(acrylic acid)**-gelatin **hydrogel** on gentamicin sulphate release: In vitro
AUTHOR: Changez M.; Burugapalli K.; Koul V.; Choudhary V.
CORPORATE SOURCE: V. Koul, Centre for Biomedical Engineering, Indian Institute of Technology, New Delhi -110016, India. E-mail: veenak@cbme.iitd.ac.in
SOURCE: Biomaterials, (2003), 24/4 (527-536), 29 reference(s) CODEN: BIMADU ISSN: 0142-9612
PUBLISHER ITEM IDENT.: S0142961202003642
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: **Hydrogels** based on **poly(acrylic acid)** and gelatin crosslinked with N,N'-methylene **bisacrylamide** (0.5mol%) and glutaraldehyde (4%), respectively, forming an interpenetrating network were employed as matrices, for studying the loading and release of gentamicin sulphate. The release kinetics of gentamicin sulphate was evaluated in water (pH .apprx.5.8), **phosphate buffer** (pH 7.4) and citrate buffer (pH 4) at 37±0.1°C. The drug release in **phosphate buffer** was faster as compared to water or citrate buffer. Fitting the data of release studies in Peppas model indicated that the release of drug from full IPNs in **phosphate buffer** (pH 7.4), water (pH.apprx.5.8) and citrate buffer (pH 4) were diffusion controlled. However, semi-IPNs showed both anomalous and Fickian diffusion mechanisms. With increasing gelatin percentage in the polymer, rate of drug release was faster and almost 85% of the loaded drug was released within 7 days in **phosphate buffer** (pH 7.4). .COPYRGT. 2002 Elsevier Science Ltd. All rights reserved.
CONTROLLED TERM: ***hydrogel**; *gelatin; *gentamicin; ***polyacrylic acid**; in vitro study; cross linking; phosphate balance; drug diffusion; drug release; article; priority journal; n,n' methylene **bisacrylamide**; amide; glutaraldehyde; buffer; citric acid; polymer; unclassified drug
CAS REGISTRY NUMBER: (gelatin) 9000-70-8; (gentamicin) 1392-48-9, 1403-66-3, 1405-41-0; (**polyacrylic acid**) 74350-43-9, 87003-46-1, **9003-01-4**, 9003-04-7; (amide) 17655-31-1; (glutaraldehyde) 111-30-8, 37245-61-7; (citric acid) 126-44-3, 5949-29-1, 77-92-9, 8002-14-0

L192 ANSWER 23 OF 39 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1999:29372728 BIOTECHNO
TITLE: A fluorescence-based **glucose** biosensor using concanavalin A and dextran encapsulated in a poly(ethylene glycol) **hydrogel**
AUTHOR: Russell R.J.; Pishko M.V.; Gefrides C.C.; McShane M.J.; Cote G.L.
CORPORATE SOURCE: M.V. Pishko, Department of Chemical Engineering, Texas

CORPORATE SOURCE: M. Akashi, Dept Applied Chem and Chemical Engn, Faculty of Engineering, Kagoshima University, 1-21-40 Korimoto, Kagoshima 890-0065, Japan. akashi@apc.eng.kagoshima-u.ac.jp
SOURCE: Journal of Biomaterials Science, Polymer Edition, (1999) Vol. 10, No. 3, pp. 331-339. .
Refs: 17
ISSN: 0920-5063 CODEN: JBSEEA
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19990319
Last Updated on STN: 19990319

ABSTRACT: In our previous study, we reported a novel method of apatite formation on/in a three-dimensional hgdrogel matrix. Using this method, bone-like apatite could be formed on/in the hydrogel matrix under normal conditions in vitro. A poly(vinyl alcohol) (PVA) gel was used as a model matrix. The method consists of two steps. first, water is transformed in a PVA gel with a CaCl2/Tris-HCl aqueous solution (pH 7.4) and second, the gel is soaked in a Na2HPO4 aqueous solution. In the present study, we report a detailed study of the effects of the swelling ratios of PVA gels on apatite formation. Cross-sectional observations and gravimetric measurements of PVA gels with various swelling ratios were done. The amount of apatite formed on/in PVA gels increased almost linearly with an increase in the reaction cycles. The rates of apatite formation on/in PVA gels largely depended on the swelling ratios, which were approximately 0.48, 0.61, 1.28, and 1.55 mg per cycle for swelling ratios of 4.1, 10.4, 16.8, and 30.1, respectively. The apatite content in PVA-apatite composites that was obtained by this method also increased with an increase of the reaction cycles. After six reaction cycles, a PVA gel with a high swelling ratio contains approximately 70 wt% of formed apatite in the composite. On the other hand, a gel with a low swelling ratio contains about 15 wt% of formed apatite in the composite. Cross-sectional views of the PVA gels after each cycle showed that apatite crystals were formed, not only on the surface of the gel but also within it after fifteen reaction cycles. The hydrogel-apatite composites that were obtained using an alternative soaking process will be useful as not only bone substitute materials but also as soft tissue adhesive materials.

CONTROLLED TERM: Medical Descriptors:
*bone prosthesis
**hydrogel**
aqueous solution
article
priority journal
Drug Descriptors:
*apatite
polyvinyl alcohol
calcium chloride
trometamol
disodium hydrogen phosphate
tissue adhesive
CAS REGISTRY NO.: (apatite) 64476-38-6; (polyvinyl alcohol) 37380-95-3, **9002-89-5**; (calcium chloride) 10043-52-4; (trometamol) 1185-53-1, 77-86-1; (disodium hydrogen phosphate) **7558-79-4**

polyolefin
polysulfone
polymer
macrogol
apatite
macrogol derivative
nitric oxide
titanium dioxide

CAS REGISTRY NO.: (glucose oxidase) 9001-37-0; (politef) 9002-84-0, 9039-02-5; (silicone) 63148-53-8, 8043-93-4, 8055-24-1; (polyurethan) 61789-63-7; (polyethylene) 9002-88-4; (polycarbonate) 24936-68-3, 25766-59-0; (acrylic acid) 10344-93-1, 79-10-7; (polysulfone) 25135-51-7; (macrogol) **25322-68-3**; (apatite) 64476-38-6; (nitric oxide) 10102-43-9; (titanium dioxide) 1317-70-0, 1317-80-2, 13463-67-7, 51745-87-0

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ACCESSION NUMBER: 1999410271 EMBASE
TITLE: Drug diffusion in adhesive hydrogels.
AUTHOR: Bairamov D.F.; Markin V.S.; Iordanskii A.L.; Feldstein M.M.
CORPORATE SOURCE: D.F. Bairamov, Biotechnologia J.St.Co., 8 Nauchny proezd, 117246 Moscow, Russian Federation
SOURCE: Proceedings of the Controlled Release Society, (1999) No. 26, pp. 385-386. .
Refs: 5
ISSN: 1022-0178 CODEN: 58GMAH
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
ENTRY DATE: Entered STN: 19991210
Last Updated on STN: 19991210
CONTROLLED TERM: Medical Descriptors:
drug diffusion
**hydrogel**
**transdermal patch**
conference paper
Drug Descriptors:
*povidone
*macrogol
*propranolol: PR, pharmaceutics
*propranolol: PK, pharmacokinetics
beta adrenergic receptor blocking agent: PR, pharmaceutics
beta adrenergic receptor blocking agent: PK, pharmacokinetics
CAS REGISTRY NO.: (povidone) **9003-39-8**; (macrogol) **25322-68-3**; (propranolol) 13013-17-7, 318-98-9, 3506-09-0, 4199-09-1, 525-66-6

L192 ANSWER 21 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1999082405 EMBASE
TITLE: Apatite formation on/in hydrogel matrices using an alternate soaking process: II. Effect of swelling ratios of poly(vinyl alcohol) hydrogel matrices on apatite formation.
AUTHOR: Taguchi T.; Kishida A.; Akashi M.

9012-72-0, 9037-91-6; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (diltiazem) 33286-22-5, 42399-41-7; (poly(methyl methacrylate)) 39320-98-4, 9008-29-1; (bicarbonate) 144-55-8, 71-52-3; (chitosan) 9012-76-4; (carrageenan) 9000-07-1, 9049-05-2, 9061-82-9, 9064-57-7; (chlorhexidine acetate) 36466-50-9, 56-95-1; (cimetidine) 51481-61-9, 70059-30-2; (ampicillin) 69-52-3, 69-53-4, 7177-48-2, 74083-13-9, 94586-58-0; (lactic acid) 113-21-3, 50-21-5

CHEMICAL NAME: Pluronic f 127

L192 ANSWER 19 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2000404459 EMBASE

TITLE: Biomaterials community examines biosensor biocompatibility.

AUTHOR: Moussy F.; Reichert W.M.

CORPORATE SOURCE: Dr. W.M. Reichert, Department of Biomedical Engineering, Box 90281, Duke University, Durham, NC 27708-0281, United States. reichert@duke.edu

SOURCE: Diabetes Technology and Therapeutics, (2000) Vol. 2, No. 3, pp. 473-477. .
Refs: 5
ISSN: 1520-9156 CODEN: DTTHFH

COUNTRY: United States

DOCUMENT TYPE: Journal; Conference Article

FILE SEGMENT: 003 Endocrinology
027 Biophysics, Bioengineering and Medical Instrumentation

LANGUAGE: English

ENTRY DATE: Entered STN: 20001213
Last Updated on STN: 20001213

CONTROLLED TERM: Medical Descriptors:
*biosensor
biocompatibility
**blood glucose monitoring**
telemetry
reproducibility
diagnostic value
calibration
microdialysis
amperometry
**hydrogel**
accuracy
device
immunosensor
glucose assay
analytic method
human
conference paper
priority journal
Drug Descriptors:
*biomaterial
*metal
*glucose oxidase
politef
epoxide
silicone
polyurethan
polyethylene
polycarbonate
acrylic acid

technology. The article serves as a useful tool for the beginners as well as for the researchers actively involved in this fascinating area of applied polymer science.

CONTROLLED TERM: Medical Descriptors:
*drug targeting
*drug design
drug formulation
pH
controlled drug release
**transdermal patch**
polymerization
biodegradation
**hydrogel**
cross linking
phase transition
thermodynamics
tablet matrix
emulsion
porosity
review
Drug Descriptors:
*polymer: PR, pharmaceutics
plasticizer: PR, pharmaceutics
macrogol: PR, pharmaceutics
urethan: PR, pharmaceutics
polycaprolactone: PR, pharmaceutics
polyglycolic acid: PR, pharmaceutics
polylactic acid: PR, pharmaceutics
polyglactin: PR, pharmaceutics
gelatin: PR, pharmaceutics
citric acid: PR, pharmaceutics
polyacrylamide: PR, pharmaceutics
hydroxypropylcellulose: PR, pharmaceutics
theophylline: PR, pharmaceutics
poloxamer: PR, pharmaceutics
glucan: PR, pharmaceutics
xyloglucan: PR, pharmaceutics
indometacin: PR, pharmaceutics
diltiazem: PR, pharmaceutics
poly(methyl methacrylate): PR, pharmaceutics
bicarbonate: PR, pharmaceutics
chitosan: PR, pharmaceutics
carrageenan: PR, pharmaceutics
polyether derivative: PR, pharmaceutics
chitin derivative: PR, pharmaceutics
chlorhexidine acetate: PR, pharmaceutics
cimetidine: PR, pharmaceutics
ampicillin: PR, pharmaceutics
lactic acid: PR, pharmaceutics
unindexed drug
unclassified drug

CAS REGISTRY NO.: (macrogol) **25322-68-3**; (urethan) 51-79-6; (polycaprolactone) 24980-41-4, 25248-42-4; (polyglycolic acid) 26124-68-5; (polylactic acid) 26100-51-6; (polyglactin) 26780-50-7, 34346-01-5; (gelatin) 9000-70-8; (citric acid) 126-44-3, 5949-29-1, 77-92-9, 8002-14-0; (polyacrylamide) 9003-05-8; (hydroxypropylcellulose) 9004-64-2; (theophylline) 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9; (poloxamer) 9003-11-6; (glucan)

Searched by Barb O'Bryen, STIC 2-2518

animal experiment
controlled study
article
Drug Descriptors:
*triclosan: PR, pharmaceutics
*triclosan: PD, pharmacology
***triclosan: TD, transdermal drug administration**
adhesive agent
polyacrylic acid: PR, pharmaceutics
carboxymethylcellulose: PR, pharmaceutics
aluminum: PR, pharmaceutics
aluminum glycinate
tartaric acid
CAS REGISTRY NO.: (triclosan) 3380-34-5; (polyacrylic acid) 74350-43-9, 87003-46-1, **9003-01-4**, 9003-04-7; (carboxymethylcellulose) 8050-38-2, 9000-11-7, 9004-32-4, 9050-04-8; (aluminum) 7429-90-5; (aluminum glycinate) 13682-92-3; (tartaric acid) 133-37-9, 3715-17-1, 526-83-0, 526-94-3, 87-69-4
CHEMICAL NAME: (1) Dp 300
COMPANY NAME: (1) Ciba Geigy

L192 ANSWER 18 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2001090768 EMBASE
TITLE: Polymeric controlled drug-delivery systems: Perspective issues and opportunities.
AUTHOR: Ravi Kumar M.N.V.; Kumar N.
CORPORATE SOURCE: M.N.V. Ravi Kumar, 354 Hlth. Sciences Research Building, Dept. of Prev. Med./Environ. Health, University of Kentucky, Lexington, KY 40536, United States. rmaje0@pop.uky.edu
SOURCE: Drug Development and Industrial Pharmacy, (2001) Vol. 27, No. 1, pp. 1-30. .
Refs: 180
ISSN: 0363-9045 CODEN: DDIPD8
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322

ABSTRACT: Although, the drug-delivery system (DDS) concept is not new, great progress has been made recently in the treatment of a variety of diseases. Targeting delivery of drugs to the diseased lesions is one of the most important aspects of DDS. To convey a sufficient dose of drug to the lesion, suitable carriers of drugs are needed. Polymers, which swell and contract in response to external pH levels, are being explored. The research in this area is being carried out all over the world at a great pace. Not only that new developments are emerging in the existing technologies, but also various new technologies are being developed and tested. Consequently, a huge amount of new information is available, which should be compiled and presented in a comprehensive way to benefit large numbers of users in this area as well as to help active research workers in the field. The purpose of this review is to discuss some recent advances and future prospects in controlled drug-delivery

ISSN: 0939-6411 CODEN: EJPBEL
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 013 Dermatology and Venereology
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20031201
Last Updated on STN: 20031201

ABSTRACT: Adhesive hydrogel patches containing Triclosan (TS) were prepared as an anti-acne dosage form. Sodium polyacrylate and carboxymethylcellulose (sodium salt) were used as matrix polymers, and Al(3+), produced by the reaction of dihydroxy aluminum aminoacetate and L(+)-tartaric acid, was employed as a crosslinking agent for the negatively charged polymers. The crosslinking reactions were done at 25, 40 and 50°C for predetermined time intervals. The semi-solid gels were obtained only when the reaction period was more than 12 h, but the polymer gels were fluidic with a shorter reaction. The swelling ratios increased as the reaction period was prolonged and the reaction temperature increased, indicating that the degree of the crosslinking is proportional to the reaction period and the temperature. On a scanning electron microphotograph, the crosslinked gel exhibited a honeycomb-like structure having pores of a few micrometers. The adhesive force of a patch, which could be easily attached to and peeled off facial skin, was 45.5 gmf and it increased by adding poly acrylic acid into the patch formulations. Propionibacterium acnes (ATCC 6919) growth inhibition area around the patch was not significant on an agar plate when TS content was 0.01 weight%, but the antibacterial activity was apparent when the content was 0.05 weight%. In vitro permeation revealed that up to 5 weight% of Transcutol (TC) content in patch, TC, a permeation enhancer, significantly increased the amount of TS transported into hairless mouse skins but it did not substantially accelerate TS transportation into the receptors of Franz diffusion cells. Since our patches for the treatment of acne was aimed to localize TS into skins, TC content of 5 weight% seems to be adequate for the dermal delivery of TS. The model patches in this study would be applicable to facial skins for the treatment of acne. 

CONTROLLED TERM: Medical Descriptors:
*acne vulgaris
***transdermal patch**
**hydrogel**
drug delivery system
cross linking
reaction time
phase transition
temperature dependence
scanning electron microscopy
chemical structure
microbial sensitivity test
Corynebacterium acnes
bacterial strain
growth inhibition
bactericidal activity
concentration response
skin permeability
nonhuman
female
mouse

eluting dexamethasone were successful in controlling negative tissue reactions at the sensor-tissue interface by reducing the level of inflammation-mediation cells to those observed in normal tissue. These composites show promise as coatings for implantable biosensors to improve biocompatibility and prolong sensor lifetime.

CONTROLLED TERM: Medical Descriptors:
*inflammation: PC, prevention
*fibrosis: PC, prevention
***hydrogel**
drug release
immunostimulation
histopathology
biosensor
**blood glucose monitoring**
material coating
tissue reaction: PC, prevention
in vitro study
in vivo study
drug delivery system
biocompatibility
evaporation
composite material
cell infiltration
drug metabolism
implant
nonhuman
male
rat
animal experiment
controlled study
animal tissue
article
priority journal
Drug Descriptors:
*dexamethasone: CR, drug concentration
*dexamethasone: PR, pharmaceutics
*dexamethasone: PK, pharmacokinetics
*dexamethasone: PD, pharmacology
*polyglactin
*polyvinyl alcohol
*microsphere
glucose

CAS REGISTRY NO.: (dexamethasone) 50-02-2; (polyglactin) 26780-50-7, 34346-01-5; (polyvinyl alcohol) 37380-95-3, **9002-89-5**; (glucose) 50-99-7, 84778-64-3

COMPANY NAME: Sigma (United States)

L192 ANSWER 17 OF 39 EMBASE 

ACCESSION NUMBER: 2003443839 EMBASE

TITLE: Hydrogel patches containing Triclosan for acne treatment.

AUTHOR: Lee T.-W.; Kim J.-C.; Hwang S.-J.

CORPORATE SOURCE: J.-C. Kim, Sch. of Biotech. and Bioengineering, Kangwon National University, 192-1, Hyoja2-dong, Chunchon, Kangwon-do 200-701, Korea, Republic of. jinkim@kangwon.ac.kr

SOURCE: European Journal of Pharmaceutics and Biopharmaceutics, (2003) Vol. 56, No. 3, pp. 407-412. .
Refs: 15

prednisolone: PD, pharmacology
vasculotropin: EC, endogenous compound
glucose: EC, endogenous compound
polyvinyl alcohol
polyglactin
CAS REGISTRY NO.: (dexamethasone) 50-02-2; (prednisolone) 50-24-8; (vasculotropin) 127464-60-2; (glucose) 50-99-7, 84778-64-3; (polyvinyl alcohol) 37380-95-3, **9002-89-5**; (polyglactin) 26780-50-7, 34346-01-5
NAME OF PRODUCT: (1) Norplant; (2) GlucoWatch G2
COMPANY NAME: (1) Wyeth (United States) ; (2) Cygnus (United States)

L192 ANSWER 16 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005042737 EMBASE
TITLE: Dexamethasone-loaded poly(lactic-co-glycolic) acid microspheres/poly(vinyl alcohol) hydrogel composite coatings for inflammation control.
AUTHOR: Patil S.D.; Papadimitrakopoulos F.; Burgess D.J.
CORPORATE SOURCE: Dr. D.J. Burgess, Dept. of Pharmaceutical Sciences, University of Connecticut, Storrs, CT 06269, United States. Diane.burgess@uconn.edu
SOURCE: Diabetes Technology and Therapeutics, (2004) Vol. 6, No. 6, pp. 887-897. .
Refs: 35
ISSN: 1520-9156 CODEN: DTTHFH
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
027 Biophysics, Bioengineering and Medical Instrumentation
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20050204
Last Updated on STN: 20050204

ABSTRACT: Background: Successful performance of implantable glucose biosensors for metabolic monitoring is dependent on tissue compatibility. Negative immunostimulatory tissue reactions that occur due to implantation-induced tissue injury and the prolonged presence of such sensors can lead to a loss of functionality and device failure. The use of novel poly(lactic-co-glycolic) acid (PLGA) microsphere/poly(vinyl alcohol) (PVA) hydrogel composite coatings for implantable biosensors to control localized inflammation and fibrosis at the sensor/tissue interface is reported. Methods: Dexamethasone-loaded PLGA microspheres were prepared using a solvent evaporation technique. Composites were fabricated by dispersing microspheres in PVA solution and performing freeze-thaw cycling. Composites were implanted into subcutaneous tissue of rats. In vitro and in vivo drug release kinetics were studied. Immunostimulatory response was determined through histopathological evaluation of excised tissue. Results: PLGA microsphere/PVA hydrogel composites achieved localized dexamethasone delivery with approximate zero-order release kinetics. A linear level A in vitro-in vivo correlation was observed (R(2) = 0.97). Dexamethasone released at a steady rate of 0.17 μg/day was sufficient to control acute and chronic inflammation as well as fibrosis. Implantation of composites containing no drug led to significant infiltration of inflammation-mediating cells at the implant site characteristic of acute inflammation followed by proliferation of a fibrotic band surrounding the implant by week 3. Conclusions: PLGA microsphere/PVA hydrogel composites

*2 hydroxyethyl methacrylate: AN, drug analysis
*2 hydroxyethyl methacrylate: PR, pharmaceutics
***2 hydroxyethyl methacrylate: TD, transdermal drug administration**
water
CAS REGISTRY NO.: (polyacrylic acid) 74350-43-9, 87003-46-1, **9003-01-4**, 9003-04-7; (2 hydroxyethyl methacrylate) 868-77-9; (water) 7732-18-5
COMPANY NAME: Wako (Japan)

L192 ANSWER 15 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005042738 EMBASE
TITLE: Corticosteroid modulation of tissue responses to implanted sensors.
AUTHOR: Friedl K.E.
CORPORATE SOURCE: Dr. K.E. Friedl, U.S. Army Res. Inst. Environ. Med., Natick, MA 01760-5007, United States.
karl.friedl@us.army.mil
SOURCE: Diabetes Technology and Therapeutics, (2004) Vol. 6, No. 6, pp. 899-901. .
Refs: 13
ISSN: 1520-9156 CODEN: DTTHFH
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
006 Internal Medicine
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
ENTRY DATE: Entered STN: 20050204
Last Updated on STN: 20050204
CONTROLLED TERM: Medical Descriptors:
*biosensor
drug release
foreign body
angiogenesis
glucose blood level
material coating
**hydrogel**
osmotic minipump
biocompatibility
inflammation
encapsulation
tissue reaction
foreign body reaction
**blood glucose monitoring**
implant
human
nonhuman
article
priority journal
Drug Descriptors:
*corticosteroid: CM, drug comparison
*corticosteroid: PR, pharmaceutics
*corticosteroid: PD, pharmacology
dexamethasone: PR, pharmaceutics
prednisolone: CM, drug comparison

SOURCE: Journal of Controlled Release, (28 Nov 2005) Vol. 108, No. 2-3, pp. 331-340. .
Refs: 30
ISSN: 0168-3659 CODEN: JCREEC
PUBLISHER IDENT.: S 0168-3659(05)00400-1
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20051208
Last Updated on STN: 20051208

ABSTRACT: A photopolymerization technique was applied in the preparation of a hydrogel composed of polyacrylic acid (PAA) in which 2-hydroxyethyl methacrylate (HEMA) was modified. The formulation of photocrosslinked PAA modified with HEMA hydrogel as an adhesive for a dermatological patch was optimized based on the simultaneous optimization technique. Photocrosslinked PAA modified with HEMA hydrogels that retained a large amount of water, above 85%, were successfully prepared. Based on the analysis of ANOVA, the gel strength and adhesiveness increased with an increase in the degree of modification with HEMA and the concentration of PAA modified with HEMA in the aqueous solution. For the optimization study, the modification with HEMA and the concentration of initiator were selected as causal factors. Gel yield, probe tack, degree of swelling and turbidity were selected as response variables. A set of causal factors and response variables was used as a tutorial date for the prediction of optimal formulation with a quadratic regression model, an artificial neural network (ANN) and a multivariate spline interpolation (MSI). Response surfaces generated with MSI well represented the nonlinear relationship between the factors and the responses, and all the observed values of the response variables coincided with the predictions. A high functional photocrosslinked PAA modified with HEMA hydrogel as an adhesive for a dermatological patch was successfully created using the simultaneous optimization technique incorporating MSI. 

CONTROLLED TERM: Medical Descriptors:
*drug formulation
***hydrogel**
***transdermal patch**
adhesion
light
cross linking
polymerization
analysis of variance
strength
aqueous solution
turbidity
prediction
regression analysis
artificial neural network
surface property
drug structure
article
priority journal
Drug Descriptors:
*polyacrylic acid: AN, drug analysis
*polyacrylic acid: PR, pharmaceutics
***polyacrylic acid: TD, transdermal drug administration**

carboplatin: IV, intravenous drug administration
carboplatin: PR, pharmaceutics
carboplatin: CJ, subconjunctival drug administration
brimonidine: CR, drug concentration
brimonidine: DT, drug therapy
brimonidine: IP, intraperitoneal drug administration
brimonidine: PK, pharmacokinetics
brimonidine: TP, topical drug administration
insulin: CR, drug concentration
insulin: DT, drug therapy
insulin: PR, pharmaceutics
insulin: PK, pharmacokinetics
insulin: TP, topical drug administration
calcitonin: PR, pharmaceutics
vasopressin: PR, pharmaceutics
immunoglobulin G: CR, drug concentration
immunoglobulin G: PR, pharmaceutics
intercellular adhesion molecule 1 antibody: DT, drug therapy
intercellular adhesion molecule 1 antibody: PR, pharmaceutics
plasmid DNA: PR, pharmaceutics
naked DNA: PR, pharmaceutics
tissue plasminogen activator: PR, pharmaceutics
oligodeoxynucleotide phosphorothioate: PR, pharmaceutics
inducible nitric oxide synthase: CR, drug concentration
inducible nitric oxide synthase: DT, drug therapy
inducible nitric oxide synthase: PR, pharmaceutics
ganciclovir: DT, drug therapy
ganciclovir: PR, pharmaceutics
ganciclovir: PD, pharmacology

CAS REGISTRY NO.: (gentamicin) 1392-48-9, 1403-66-3, 1405-41-0; (silicone) 63148-53-8, 8043-93-4, 8055-24-1; (tungsten) 7440-33-7; (polyvinyl alcohol) 37380-95-3, **9002-89-5**; (betamethasone) 378-44-9; (ethylene vinyl acetate copolymer) 24937-78-8; (prednisolone) 50-24-8; (2 hydroxyethyl methacrylate) 868-77-9; (ethylene glycol dimethacrylate) 97-90-5; (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1; (methylprednisolone) 6923-42-8, 83-43-2; (amikacin) 37517-28-5, 39831-55-5; (carboplatin) 41575-94-4; (brimonidine) 59803-98-4; (insulin) 9004-10-8; (calcitonin) 12321-44-7, 21215-62-3, 9007-12-9; (vasopressin) 11000-17-2; (immunoglobulin G) 97794-27-9; (tissue plasminogen activator) 105913-11-9; (inducible nitric oxide synthase) 501433-35-8; (ganciclovir) 82410-32-0

NAME OF PRODUCT: (1) Eyegate; (2) Phoresor; OcuPhor

COMPANY NAME: (1) Optis (France) ; (2) Iomed (United States)

L192 ANSWER 14 OF 39 EMBASE 

ACCESSION NUMBER: 2005512224 EMBASE

TITLE: Formulation optimization of photocrosslinked polyacrylic acid modified with 2-hydroxyethyl methacrylate hydrogel as an adhesive for a dermatological patch.

AUTHOR: Onuki Y.; Hoshi M.; Okabe H.; Fujikawa M.; Morishita M.; Takayama K.

CORPORATE SOURCE: Y. Onuki, Department of Pharmaceutics, Hoshi University, Ebara 2-4-41, Shinagawa, Tokyo 142-8501, Japan. onuki@hoshi.ac.jp

retinoblastoma: DT, drug therapy
glaucoma: DT, drug therapy
drug distribution
diabetic retinopathy: CO, complication
diabetic retinopathy: DT, drug therapy
osmotic pump
leukostasis: DT, drug therapy
gene therapy
uveitis: DT, drug therapy
retinitis: DT, drug therapy
retinitis: ET, etiology
Cytomegalovirus
retina macula age related degeneration: DT, drug therapy
human
nonhuman
review
priority journal
Drug Descriptors:
gentamicin: CR, drug concentration
gentamicin: DT, drug therapy
gentamicin: PR, pharmaceutics
gentamicin: CJ, subconjunctival drug administration
silicone
tungsten
polyvinyl alcohol: PR, pharmaceutics
betamethasone: PR, pharmaceutics
ethylene vinyl acetate copolymer: PR, pharmaceutics
prednisolone: CR, drug concentration
prednisolone: PO, oral drug administration
prednisolone: PR, pharmaceutics
prednisolone: PK, pharmacokinetics
prednisolone: TP, topical drug administration
2 hydroxyethyl methacrylate
ethylene glycol dimethacrylate: PR, pharmaceutics
acetylsalicylic acid: CR, drug concentration
acetylsalicylic acid: DT, drug therapy
acetylsalicylic acid: IV, intravenous drug administration
acetylsalicylic acid: PR, pharmaceutics
nonsteroid antiinflammatory agent: CR, drug concentration
nonsteroid antiinflammatory agent: DT, drug therapy
nonsteroid antiinflammatory agent: PR, pharmaceutics
prostaglandin synthase inhibitor: CR, drug concentration
prostaglandin synthase inhibitor: DT, drug therapy
prostaglandin synthase inhibitor: PR, pharmaceutics
corticosteroid: DT, drug therapy
corticosteroid: PR, pharmaceutics
methylprednisolone: CR, drug concentration
methylprednisolone: DT, drug therapy
methylprednisolone: IV, intravenous drug administration
methylprednisolone: PR, pharmaceutics
aminoglycoside antibiotic agent: CR, drug concentration
aminoglycoside antibiotic agent: DT, drug therapy
aminoglycoside antibiotic agent: PR, pharmaceutics
aminoglycoside antibiotic agent: PK, pharmacokinetics
amikacin: CR, drug concentration
amikacin: DT, drug therapy
amikacin: PR, pharmaceutics
amikacin: PK, pharmacokinetics
carboplatin: CR, drug concentration
carboplatin: DT, drug therapy

States. jhill@lsuhsc.edu
SOURCE: Advanced Drug Delivery Reviews, (13 Dec 2005) Vol. 57, No. 14 SPEC. ISS., pp. 2063-2079. .
Refs: 83
ISSN: 0169-409X CODEN: ADDREP
PUBLISHER IDENT.: S 0169-409X(05)00171-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 012 Ophthalmology
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20060119
Last Updated on STN: 20060119

ABSTRACT: Age-related macular degeneration, diabetic retinopathy, posterior uveitis, and retinitis due to glaucoma are leading causes of vision loss in the United States and other developed countries. Because these diseases are located in the posterior segment of the eye, topical application of ophthalmic medicines is of limited benefit, since topically applied drugs rarely reach therapeutic levels in the affected posterior tissues such as the choroid and retina. Intravitreal injections can deliver drugs to the posterior segment without the side effects associated with systemic administration. However, the repeated and long-term injections often needed may cause complications, such as vitreous hemorrhage, retinal detachment, or endophthalmitis. Recent advances in ocular drug delivery methods and the development of novel biopharmaceutical agents could lead to new regimens for the treatment of disease of the posterior retina, choroids, and macula. This review will summarize recent literature concerning ocular drug delivery of bioactive compounds to the posterior segment of the eye with emphasis on transscleral iontophoresis. 

CONTROLLED TERM: Medical Descriptors:
*drug delivery system
*posterior eye chamber
*eye disease: DT, drug therapy
*iontophoresis
controlled drug release
pH measurement
drug penetration
electric current
**hydrogel**
minimum inhibitory concentration
drug tissue level
electric field
hydrophilicity
implant
sustained drug release
**transdermal patch**
drug blood level
drug bioavailability
cross linking
eye infection: DT, drug therapy
retina disease
cornea burn
eye inflammation: DT, drug therapy
endophthalmitis: DT, drug therapy
keratitis: DT, drug therapy

screen-printed carbon electrode on which a redox hydrogel and avidin are co-electrodeposited. To neutralize nonspecifically binding positively charged microdomains of the avidin, two polyanions, poly(acrylic acid-co-maleic acid) and poly-(acrylic acid), are applied. These polyanions bind to the film not only electrostatically but also by Michael addition reaction to cysteine, lysine, or arginine functions of the avidin. The electrode is then made specific for the analyte, for which rabbit IgG was chosen, by conjugating the film-bound avidin to biotin-labeled anti-rabbit IgG. After exposure to the tested solution and capture of rabbit IgG, the sandwich is completed by conjugation of horseradish-peroxidase (HRP)-labeled anti-rabbit IgG. Electrical contact between the HRP and the electrode-bound hydrogel results in the formation of an electrocatalyst for the electroreduction of H(2)O(2) to water. The application of the poly(acrylic acid-co-maleic acid) and the poly(acrylic acid) reduces the nonspecific adsorption-associated noise, lowers the detection limit from 3 ng/mL (.apprx.20 pM analyte antibody concentration) to .apprx.7 pg/mL (.apprx.40 fM analyte antibody concentration), and also expands the dynamic range to 10(4). .COPYRGT. 2005 American Chemical Society.

CONTROLLED TERM: Medical Descriptors:
*electrochemistry
*antibody specificity
drug targeting
amperometric biosensor
enzyme immunoassay
monitoring
oxidation reduction reaction
Michael addition
**hydrogel**
adsorption
**blood glucose monitoring**
binding affinity
enzyme labeled detection probe
molecular probe
nonhuman
article
Drug Descriptors:
avidin
polyanion
polyacrylic acid
poly(acrylic acid co maleic acid)
horseradish peroxidase
cysteine
lysine
arginine
immunoglobulin G
unclassified drug

CAS REGISTRY NO.: (polyacrylic acid) 74350-43-9, 87003-46-1, **9003-01-4**, 9003-04-7; (cysteine) 4371-52-2, 52-89-1, 52-90-4; (lysine) 56-87-1, 6899-06-5, 70-54-2; (arginine) 1119-34-2, 15595-35-4, 7004-12-8, 74-79-3; (immunoglobulin G) 97794-27-9

L192 ANSWER 13 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005554326 EMBASE

TITLE: Recent progress in ocular drug delivery for posterior segment disease: Emphasis on transscleral iontophoresis.

AUTHOR: Myles M.E.; Neumann D.M.; Hill J.M.

CORPORATE SOURCE: J.M. Hill, Department of Ophthalmology, LSU Eye Center, 2020 Gravier Street, New Orleans, LA 70112-2234, United

ISSN: 0098-1133 (ISSN print).
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Apr 2003
Last Updated on STN: 16 Apr 2003
ABSTRACT:The invention relates to a pharmaceutical composition having the following constituents: azelaic acid, **polyacrylic acid**, triacylglyceride, propylene glycol, polysorbate, soya lecithin, water and salts. The composition is a **hydrogel** which is suited for the treatment of rosacea, presbyderma, melasma or **skin** irritations.
NAT. PATENT. CLASSIF.:424401000
CONCEPT CODE: Biochemistry studies - General 10060
Biochemistry studies - Lipids 10066
Integumentary system - Physiology and biochemistry 18504
Integumentary system - Pathology 18506
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Integumentary System (Chemical Coordination and Homeostasis)
INDEX TERMS: Diseases
melasma: integumentary system disease
INDEX TERMS: Diseases
presbyderma: integumentary system disease
INDEX TERMS: Diseases
**skin** irritation: integumentary system disease
INDEX TERMS: Chemicals & Biochemicals
azelaic acid; **polyacrylic acid**; polysorbate; propylene glycol; rosacea; salt; soya lecithin; triacylglyceride
REGISTRY NUMBER: 123-99-9 (azelaic acid)
**9003-01-4** (**polyacrylic acid**)
57-55-6 (propylene glycol)
**7647-14-5** (salt)

L192 ANSWER 12 OF 39 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005556840 EMBASE
TITLE: Reduction of the nonspecific binding of a target antibody and of its enzyme-labeled detection probe enabling electrochemical immunoassay of an antibody through the 7 pg/mL-100 ng/mL (40 fM-400 pM) range.
AUTHOR: Zhang Y.; Heller A.
CORPORATE SOURCE: A. Heller, Department of Chemical Engineering, Texas Materials Institute, University of Texas at Austin, Austin, TX 78712, United States. heller@che.utexas.edu
SOURCE: Analytical Chemistry, (1 Dec 2005) Vol. 77, No. 23, pp. 7758-7762. .
Refs: 33
ISSN: 0003-2700 CODEN: ANCHAM
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20060106
Last Updated on STN: 20060106
ABSTRACT: We describe a simple, potentially low-cost, amperometric, enzyme-amplified, sandwich-type immunoassay, monitoring IgG at a concentration as low as .apprx.7 pg/mL with a dynamic range of 10(4). The assay utilizes a

Last Updated on STN: 12 Oct 2005

ABSTRACT: Poly(N-vinyl-2-pyrrolidone)-kappa-carrageenan **hydrogels** (PVP-KC) were prepared by irradiating the mixtures of aqueous solutions of PVP, KC, **potassium chloride**, and poly(ethylene glycol) by gamma-rays at different doses. Their preliminary laboratory tests were evaluated to identify their usability in wound dressing applications. For investigation of the effect of components on the gelation of PVP, sol-gel analyses were made and gel fractions of the **hydrogels** were determined. Mechanical experiments were conducted for both unirradiated and irradiated samples. For investigation of the fluid uptake capacity of the ***hydrogels*** , swelling experiments were performed in pseudo-extracellular fluid solution at various temperatures. Acidity/alkalinity (pH) and electrical conductivity tests were achieved from aqueous extracts of **hydrogels**, and bioadhesion strength of the **hydrogels** was investigated on human ***skin.*** (c) 2005 Wiley Periodicals, Inc.

CONCEPT CODE: Radiation biology - General 06502
Biochemistry studies - General 10060
Biophysics - Bioengineering 10511
Integumentary system - Physiology and biochemistry 18504
Integumentary system - Pathology 18506

INDEX TERMS: Major Concepts
Dermatology (Human Medicine, Medical Sciences);
Biomedical Engineering (Allied Medical Sciences);
Radiation Biology

INDEX TERMS: Parts, Structures, & Systems of Organisms
**skin**: integumentary system

INDEX TERMS: Chemicals & Biochemicals
**potassium chloride**;
polyvinylpyrrolidone; poly(ethylene glycol);
poly(N-vinyl-2-pyrrolidone)-kappa-carrageenan
**hydrogel**

INDEX TERMS: Miscellaneous Descriptors
radiation; wound dressing

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common)
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

REGISTRY NUMBER: **7447-40-7** (**potassium chloride**)
**9003-39-8** (polyvinylpyrrolidone)
**25322-68-3** (poly(ethylene glycol))

L192 ANSWER 11 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:194273 BIOSIS
DOCUMENT NUMBER: PREV200300194273
TITLE: Composition with azelaic acid.
AUTHOR(S): Franke, Patrick [Inventor, Reprint Author]; Gunther, Clemens [Inventor]; Riedl, Jutta [Inventor]
CORPORATE SOURCE: Berlin, Germany
ASSIGNEE: Schering Aktiengesellschaft, Berlin, Germany
PATENT INFORMATION: US 6534070 20030318
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Mar 18 2003) Vol. 1268, No. 3. http://www.uspto.gov/web/menu/patdata.html. e-file.

fields. A novel copolymer hydrogel was prepared in the membrane form using 2-hydroxyethyl methacrylate monomer (HEMA) and a macromonomer p-vinylbenzyl-***poly*** **(ethylene oxide)** (V-PEO) via photoinitiated polymerization. A series of poly(HEMA/V-PEO) copolymer membranes with different compositions was prepared. The membranes were characterized using infrared, thermal and SEM analysis. The thermal stabilities of the copolymer membranes were found to be lowered by an increase in the ratio of macromonomer (V-PEO) in the membrane structure. Because of the incorporation of PEO segments, the copolymers exhibited significantly higher hydrophilic surface properties than pure poly(HEMA), as demonstrated by contact angle measurements. Equilibrium swelling studies were conducted to investigate the swelling behavior of the membranes. The equilibrium water uptake was reached in about 4 h. Moreover, the blood protein adsorption and platelet adhesion were significantly reduced on the surface of the PEO containing copolymer membranes compared to control pure poly(HEMA). Drug release experiments were performed in a continuous release system using model drug (vancomycin) loaded copoly(HEMA/V-PEO) membranes. A specific poly(HEMA/V-PEO) membrane formulation possessing the highest PEO content (with a HEMA:V-PEO (mmol:mmol) feed ratio of 112:1 and loaded with 40 mg antibiotic/g polymer) released about 81% of the total loaded drug in 24 h at pH 7.4. This membrane composition provided the best results and can be considered as a potential candidate for a ***transdermal*** antibiotic carrier and various biomedical and biotechnological applications.

CONTROLLED TERM: Anti-Bacterial Agents: PK, pharmacokinetics
*Biocompatible Materials: CH, chemistry
Calorimetry, Differential Scanning
*Delayed-Action Preparations: CH, chemistry
Drug Carriers: CH, chemistry
*Ethylene Oxide: CH, chemistry
***Hydrogel: CH, chemistry**
Membranes: CH, chemistry
*Methacrylates: CH, chemistry
Microscopy, Electron, Scanning
Polymers: CH, chemistry
Polymers: RE, radiation effects
Surface Properties
Vancomycin: PK, pharmacokinetics

CAS REGISTRY NO.: 1404-90-6 (Vancomycin); 25852-47-5 (Hydrogel); 75-21-8 (Ethylene Oxide); 868-77-9 (hydroxyethyl methacrylate)

CHEMICAL NAME: 0 (Anti-Bacterial Agents); 0 (Biocompatible Materials); 0 (Delayed-Action Preparations); 0 (Drug Carriers); 0 (Methacrylates); 0 (Polymers)

L192 ANSWER 10 OF 39 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:409240 BIOSIS

DOCUMENT NUMBER: PREV200510196965

TITLE: Radiation synthesis of poly(N-vinyl-2-pyrrolidone)-kappa-carrageenan **hydrogels** and their use in wound dressing applications. I. Preliminary laboratory tests.

AUTHOR(S): Sen, Murat [Reprint Author]; Avci, Esra Nazan

CORPORATE SOURCE: Hacettepe Univ, Dept Chem, Div Polymer Chem, TR-06532 Ankara, Turkey
msen@hacettepe.edu.tr

SOURCE: Journal of Biomedical Materials Research, (AUG 1 2005) Vol. 74A, No. 2, pp. 187-196.
ISSN: 1549-3296 (print). E-ISSN: 1552-4965 (electronic).

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 12 Oct 2005

flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: 7727-21-1, Potassium persulfate 7727-54-0, Ammonium persulfate 15593-29-0, Sodium persulfate
ROLE: CAT (Catalyst use); USES (Uses)
(initiator; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: 56-81-5, Glycerin, uses 7732-18-5, Water, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(polymerization medium; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: **9003-01-4P**, Polyacrylic acid 9003-05-8P, Polyacrylamide 9003-06-9P, Acrylamide-acrylic acid copolymer 24980-58-3P, Acrylic acid-vinyl acetate copolymer
ROLE: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: 67-63-0, Isopropyl alcohol, uses 141-53-7, Sodium formate **7558-80-7**, Monosodium phosphate **7647-14-5**, Sodium chloride, uses 27986-36-3, Ethylene glycol nonylphenyl ether
ROLE: NUU (Other use, unclassified); USES (Uses)
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

L192 ANSWER 9 OF 39 MEDLINE on STN
ACCESSION NUMBER: 2005602526 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16208632
TITLE: Novel hydrogel membrane based on copoly(hydroxyethyl methacrylate/p-vinylbenzyl-**poly(ethylene oxide)**) for biomedical applications: properties and drug release characteristics.
AUTHOR: Arica M Yakup; Bayramoglu Gulay; Arica Betul; Yalcin Emine; Ito Koichi; Yagci Yusuf
CORPORATE SOURCE: Biochemical Processing and Biomaterial Research Laboratory, Faculty of Science, Kirikkale University, 71450-Yahsihan-Kirikkale, Turkey.. yakuparica@kku.edu.tr
SOURCE: Macromolecular bioscience, (2005 Oct 20) 5 (10) 983-92. Journal code: 101135941. ISSN: 1616-5187.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200512
ENTRY DATE: Entered STN: 20051115
Last Updated on STN: 20051216
Entered Medline: 20051206

ABSTRACT:
The aim of this study was to synthesize and characterize a novel biocompatible polymeric membrane system and demonstrate its potential use in various biomedical applications. Synthetic hydrogels based on poly(hydroxyethyl methacrylate), poly(HEMA), have been widely studied and used in biomedical

0.1-0.3% ethoxylated nonylphenol; and the balance, water. Alternatively, the gel granules comprise the above copolymer components or are aqueous solns. of copolymers of 15-35% acrylic acid; 3-7% vinyl acetate; and/or 1.5-3.5% acrylamide with 0.01-0.02% ammonium or potassium persulfate; 0.1-0.4% sodium formate and the balance water; or solns. of 18-20% acrylamide; 0.3-0.5% iso-Pr alc.; 0.01-0.03% sodium or ammonium persulfate; and the balance water. The copolymers have mol. weight of 15,000,000 viscosity of 8-15 dL/g, Huggins constant of 0.15-0.45, the gel granules in diluted aqueous solution are stable for up to 2 yr.
The copolymers are obtained by irradiation of the monomer solution with γ-rays from a 60Co source, dose of 10,000 Ci and adsorbed radiation of 3-10 KGy/h, electron beam irradiation using a 3-6 mEV source, and/or microwave irradiation with 30-80 W/cm3 energy source; the polymerization mechanism is radical-thermochem. An aqueous
solution of acrylamide, acrylic acid, NaCl, Na formate, Na EDTA, and iso-Pr alc. was irradiated with γ-rays to obtain anionic copolymer soluble in water and suitable for use in extraction metallurgy, petroleum extraction, textile industry, etc.
The obtained polymers were granulated using a 3-point 0.6-1 kW microwave source, producing 2-3 mm granules; these granules were subjected to heat treatment under microwave irradiation at temps. below 80°. The Na2SO4 and Na2CO3 are used to prevent agglomeration of gel granules upon handling and storage. The gel granules can be packaged in plastic bags for shipment and storage.

SUPPL. TERM: anionic flocculant acrylamide polyacrylate prepn gamma ray; microwave electron beam microwave irradn polyacrylamide prepn; polyacrylamide gel water soluble anionic flocculant prepn

INDEX TERM: Flocculants
(anionic; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: Polymerization
(gamma ray; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: Polymerization
(microwave-induced; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: **Hydrogels**
(process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: Polymerization
(radiochem., electron-beam induced; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: 497-19-8, Sodium carbonate (Na2CO3), uses 7757-82-6, Sodium sulfate (Na2SO4), uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(anti-agglomeration agent; process for manufacture of water-soluble acrylic anionic flocculants by combination of ionizing radiation and electron beam and microwave radiation)

INDEX TERM: 139-33-3
ROLE: NUU (Other use, unclassified); USES (Uses)
(gel; process for manufacture of water-soluble acrylic anionic

ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels influenced by buffers)

INDEX TERM: **7447-40-7**, Potassium chloride, processes
**7758-11-4**, Dipotassium hydrogen phosphate
7778-80-5, Potassium sulfate, processes 10043-52-4, Calcium chloride, processes
ROLE: PEP (Physical, engineering or chemical process); PROC (Process)
(re-swelling medium effect onPVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)

INDEX TERM: 14797-55-8, Nitrate, biological studies 14797-65-0, Nitrite, biological studies 14798-03-9, Ammonium, biological studies
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(storage in fluid medium of nitrifying microorganisms encapsulated in PVAL hydrogels influenced by medium composition)

L192 ANSWER 8 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:481136 CAPLUS
DOCUMENT NUMBER: 133:59243
ENTRY DATE: Entered STN: 17 Jul 2000
TITLE: Process for manufacture of water-soluble anionic flocculant using ionizing radiation, electron beam, and microwave radiation
INVENTOR(S): Dragusin, Mitica
PATENT ASSIGNEE(S): S.C. Polirad S.R.L., Bucuresti, Rom.
SOURCE: Rom., 6 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
INT. PATENT CLASSIF.:
MAIN: C08F020-02
SECONDARY: C08F020-56
CLASSIFICATION: 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 46
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| RO 112356 | B1 | 19970829 | RO 1994-1139 | 19940704 |
| PRIORITY APPLN. INFO.: | | | RO 1994-1139 | 19940704 |

PATENT CLASSIFICATION CODES:

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| RO 112356 | ICM | C08F020-02 |
| | ICS | C08F020-56 |
| | IPCI | C08F0020-02 [ICM,6]; C08F0020-56 [ICS,6] |
| | ECLA | C08F220/56 |

ABSTRACT:
The acrylamide copolymer flocculants in the form of gel granules contain 40-50% acrylamide; 35% acrylic acid or sodium acrylate monomers and 8-10% anhydrous Na2SO4 or 6-8% Na2CO3 coupled with 2-4% monosodium phosphate; 0.01-0.02% sodium formate; 0.01-0.02% sodium or ammonium persulfate; 0.01-0.02% sodium EDTA;

hydrogels)
INDEX TERM: Polyoxyalkylenes, reactions
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(in enhanced PVAL hydrogel production; PVAL hydrogel produced from low mol. polethyleneglycol and polyvinylalc. solution)
INDEX TERM: Reactors
(loop; bioreactor type effect on nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels)
INDEX TERM: Stability
(mech.; PVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)
INDEX TERM: Buffers
(nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels influenced by buffers)
INDEX TERM: Nitrification
(nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels influenced by hydrogel composition)
INDEX TERM: Physiological saline solutions
(phosphate-buffered; nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels influenced by buffers)
INDEX TERM: Swelling, physical
(re-swelling; PVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)
INDEX TERM: Polysiloxanes, processes
ROLE: PEP (Physical, engineering or chemical process); PROC (Process)
(silicon oil medium for freeze-thawing PVAL hydrogel drop formation)
INDEX TERM: Bioreactors
(stirred-tank; bioreactor type effect on nitrification by nitrifying microorganisms encapsulated in PVAL hydrogels)
INDEX TERM: Gels
(strength; PVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)
INDEX TERM: Wastewater treatment
Water purification sludge
(wastewater treatment by PVAL hydrogel with encapsulated nitrifying microorganisms)
INDEX TERM: **9002-89-5P**, Polyvinylalcohol
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(hydrogel, LentiKats; PVAL hydrogel development as a carrier matrixes for encapsulation of living cells)
INDEX TERM: **25322-68-3P**, Polyethyleneglycol
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(in enhanced PVAL hydrogel production; PVAL hydrogel produced from low mol. polethyleneglycol and polyvinylalc. solution)
INDEX TERM: 1132-61-2, MOPS

Section cross-reference(s): 10, 16, 38

ABSTRACT:
Carrier matrixes were developed for the encapsulation of living cells. A polyvinylalc. (PVAL) hydrogel was produced from low mol. polethyleneglycols (PEG) and a PVAL solution Porous, lenticular-formed hydrogels (LentiKat) were obtained with 3 mm diameter and 200-400 μm height. A continuous production was achieved on a half-tech. scale with >0.5 kg/h (>1,000,000 Lentikats) capacity. With increased drying degree tensile strength was increased together with the E-module at decreasing drawing extension. The mech. stability was increased by reswelling media with multivalent anions like SO42- and PO43-. Higher PVAL concns. increased tensile strength and E-module at constant drawing extension. Higher mol. wts. of the additives led to lower E-module and tensile strength. An increasing PEG mol. weight gave larger pores. Increased PVAL concns. formed broader polymer links between the pores. PVAL hydrogels from 10% PVAL 17/99 and 6% PEG-1000 had a medium tensile strength of 0.48 N/mm2, an E-module of 0.11 N/mm2, and drawing extensions from 350-450%. The LentiKats were temperature stable >55° and after 4 mo stirring practically abrasion-free. Immobilizing encapsulation with Nitrosomonas at 0.06% biol. dry matter led to a maximal starting activities of 75%. Nitrobacter was not inhibited by immobilization. Maximal conversion rates were obtained from 7-8 μmol NH4+/(gKat+min). Immobilized cells were stable for several months at 4° and 20°. The stability was increased by substrates and temperature reduction towards the support metabolism Activated immobilizates had an increased stability. LentiKats were suitable for stirring, swirl layer, and airlift reactors. Volume-time-yields were obtained of <100 mg NH4-N/l+h with a continuous nitrification at 5% immobilizate loading. Aquarium and waste deposit seepage H2O were tested as possible applications.

SUPPL. TERM: nitrifying bacteria immobilization polyvinylalc polyethyleneglycol hydrogel LentiKat; Nitrosomonas Nitrobacter immobilization polyvinylalc polyethyleneglycol hydrogel LentiKat; wastewater treatment LentiKat polyvinylalc polyethyleneglycol nitrifying bacteria

INDEX TERM: Polymer blends
ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(PEG-PVA; PVAL hydrogel produced from low mol. polethyleneglycol and polyvinylalc. solution)

INDEX TERM: **Hydrogels**
Immobilization, biochemical
(PVAL hydrogel development as a carrier matrixes for encapsulation of living cells)

INDEX TERM: Nitrifying bacteria
Nitrobacter
Nitrosomonas
(PVAL hydrogel properties as a carrier matrixes for encapsulation of nitrifying microorganisms)

INDEX TERM: Drying
(dewatering; drying parameters influenced the PVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)

INDEX TERM: Molding of plastics and rubbers
(drawing; PVAL hydrogel properties as a carrier matrixes for encapsulation of living cells)

INDEX TERM: Bioreactors
(fluidized bed; bioreactor type effect on nitrification by nitrifying microorganisms encapsulated in PVAL

INDEX TERM: Bentonite, biological studies
Fertilizers
Gibberellins
Humic acids
Polyoxyalkylenes, biological studies
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(manufacture of composite agent for crop cultivation in dry land)

INDEX TERM: Fulvic acids
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(potassium fulvate; manufacture of composite agent for crop cultivation in dry land)

INDEX TERM: 131-52-2, Sodium pentachlorophenol 133-32-4, Indolebutyric acid 137-26-8, Thiram 593-50-0, Triacontanol 1214-39-7, 6-Benzylaminopurine 1303-96-4, Borax 3761-53-3, Acid scarlet **7447-40-7**, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7720-78-7, Ferrous sulfate 7722-64-7, Potassium permanganate 7733-02-0, Zinc sulfate 7758-98-7, Copper sulfate, biological studies **7778-77-0**, Potassium dihydrogen phosphate 7783-28-0, Diammonium hydrogen phosphate 7785-87-7, Manganese sulfate 10043-35-3, Boric acid, biological studies 10124-37-5, Calcium nitrate 10605-21-7, Carbendazim 12027-67-7, Ammonium molybdate 15165-79-4, Potassium 1-naphthyl acetate 24634-61-5, Potassium sorbate **25322-68-3**, Polyethylene glycol **25322-68-3D** , fatty alc. ether 73989-17-0, Avermectin 107534-96-3, Tebuconazole
ROLE: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(manufacture of composite agent for crop cultivation in dry land)

INDEX TERM: 57-13-6, Urea, biological studies **110-26-9**, N, N'-Methylene diacrylamide 139-33-3, Disodium ethylene diamine tetraacetate 10192-85-5, Potassium acrylate 10198-40-0, Cobalt 60, biological studies
ROLE: AGR (Agricultural use); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
(manufacture of composite agent for crop cultivation in dry land)

L192 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:710660 CAPLUS
DOCUMENT NUMBER: 133:325394
ENTRY DATE: Entered STN: 09 Oct 2000
TITLE: Development of column supports for biocalalysts
AUTHOR(S): Jekel, Maren
CORPORATE SOURCE: Luneburg, Germany
SOURCE: Landbauforschung Voelkenrode, Sonderheft (1999), 198, i-v, 1-156
CODEN: LVSWAI; ISSN: 0376-0723
PUBLISHER: Bundesforschungsanstalt fuer Landwirtschaft Braunschweig-Voelkenrode
DOCUMENT TYPE: Journal
LANGUAGE: German
CLASSIFICATION: 61-5 (Water)

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                E US2003-643631/AP,PRN 25
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L1            1 SEA ABB=ON  US2003-643631/AP
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                SET DETAIL LOGIN
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                D SCAN
L2           78 SEA ABB=ON  TAMADA J?/AU
L3          182 SEA ABB=ON  TIERNEY M?/AU
L4         2846 SEA ABB=ON  WILLIAMS S?/AU

     FILE 'STNGUIDE' ENTERED AT 15:48:29 ON 01 FEB 2006

     FILE 'CAPLUS' ENTERED AT 15:59:36 ON 01 FEB 2006
L5            3 SEA ABB=ON  L2 AND L3 AND L4
L6         6876 SEA ABB=ON  HYDROGELS/CT
L7            9 SEA ABB=ON  (L2 OR L3 OR L4) AND L6
L8       103503 SEA ABB=ON  SKIN/CT
L9            7 SEA ABB=ON  (L2 OR L3 OR L4) AND L6 AND L8

     FILE 'REGISTRY' ENTERED AT 16:00:59 ON 01 FEB 2006
L10           1 SEA ABB=ON  112-38-9
                E "N,N'-METHYLENE BIS-ACRYLAMIDE"/CN
                E "N,N'-METHYLENE BISACRYLAMIDE"/CN

     FILE 'CAPLUS' ENTERED AT 16:02:41 ON 01 FEB 2006
                SEL RN L1

     FILE 'REGISTRY' ENTERED AT 16:02:45 ON 01 FEB 2006
L11          19 SEA ABB=ON  (111-55-7/BI OR 112-38-9/BI OR 187862-99-3/BI OR
                25034-86-0/BI OR 25322-68-3/BI OR 50-99-7/BI OR 7440-06-4/BI
                OR 7447-40-7/BI OR 7558-79-4/BI OR 7558-80-7/BI OR 7647-14-5/BI
                 OR 7722-84-1/BI OR 7758-11-4/BI OR 7778-77-0/BI OR 7782-42-5/B
                I OR 9001-37-0/BI OR 9002-89-5/BI OR 9003-01-4/BI OR 9003-39-8/
                BI)
                D SCAN
                E "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/CN
L12           1 SEA ABB=ON  "2-PROPENAMIDE, N,N'-METHYLENEBIS-"/CN
                D SCAN

     FILE 'REGISTRY' ENTERED AT 16:04:48 ON 01 FEB 2006
                D IDE
                SET SMARTSELECT ON
L13             SEL L12 1- RN :       1 TERM
                SET SMARTSELECT OFF
L14        3466 SEA ABB=ON  L13/CRN
L15           1 SEA ABB=ON  L14 AND L11
                D SCAN
L16           1 SEA ABB=ON  POTASSIUM CHLORIDE/CN
L17           1 SEA ABB=ON  SODIUM CHLORIDE/CN

     FILE 'STNGUIDE' ENTERED AT 16:11:51 ON 01 FEB 2006
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     FILE 'REGISTRY' ENTERED AT 16:14:42 ON 01 FEB 2006
L18            4 SEA ABB=ON  7558-79-4 OR   7558-80-7 OR   7558-79-4 OR
                 7558-80-7 OR  7758-11-4 OR   7778-77-0
L19            4 SEA ABB=ON  9002-89-5 OR  9003-01-4 OR  9003-39-8 OR  25322-68-
                 3

     FILE 'CAPLUS' ENTERED AT 16:15:40 ON 01 FEB 2006
L20         1426 SEA ABB=ON  L10
L21         8474 SEA ABB=ON  (L12 OR L14)
L22       167089 SEA ABB=ON  (L16 OR L17)
L23        22002 SEA ABB=ON  L18
L24       172352 SEA ABB=ON  L19

     FILE 'STNGUIDE' ENTERED AT 16:16:38 ON 01 FEB 2006

     FILE 'CAPLUS' ENTERED AT 16:22:33 ON 01 FEB 2006
L25         6577 SEA ABB=ON  BIOCID?/OBI
L26            9 SEA ABB=ON  L25 AND L20
                 D SCAN TI
L27       162216 SEA ABB=ON  BACTERICID?/OBI OR FUNGICID?/OBI OR MICROBICID?/OBI

L28          190 SEA ABB=ON  L20 AND L27
L29            0 SEA ABB=ON  L20 AND L27 AND L6
L30       183278 SEA ABB=ON  CROSSLINK?/OBI OR CROSS LINK?/OBI
L31         2453 SEA ABB=ON  L21 AND L30
L32         1277 SEA ABB=ON  L21 (L) L30
L33          193 SEA ABB=ON  L32 AND L6
L34           28 SEA ABB=ON  L33 AND L24
L35           28 SEA ABB=ON  L34 AND (L20 OR L21 OR L22 OR L23)
                 D QUE
L36            6 SEA ABB=ON  L34 AND (L20 OR (L22 OR L23))
                 D SCAN TI
L37           42 SEA ABB=ON  L20(L)L27
L38            2 SEA ABB=ON  L24 AND L37
L39           16 SEA ABB=ON  L20 AND L27 AND L24
                 D SCAN L38
L40       130813 SEA ABB=ON  BACTERICID?/CW OR FUNGICID?/CW OR MICROBICID?/CW
L41          171 SEA ABB=ON  L40 AND L20
L42           16 SEA ABB=ON  L40 AND L20 AND L24
L43           16 SEA ABB=ON  L39 AND L42
L44        10122 SEA ABB=ON  TRANSDERM?/OBI
L45            2 SEA ABB=ON  L20 AND L24 AND L27 AND L44
                 D QUE L36
L*** DEL 491915 S ?RADIAT?
L46       971902 SEA ABB=ON  ?RADIAT?/BI
L47          146 SEA ABB=ON  L46 AND L21 AND L30
L48           23 SEA ABB=ON  L46 (L) L21 (L) L30
                 D QUE
L49            5 SEA ABB=ON  L48 AND L24
L50            3 SEA ABB=ON  L21 AND L22 AND L23 AND L24
                 D SCAN TI
L51           21 SEA ABB=ON  L44 AND L6 AND L24
L52            2 SEA ABB=ON  L51 AND (L20 OR L21 OR L22 OR L23)
                 D SCAN TI
L53          274 SEA ABB=ON  L24 AND L23 AND L22
L54            6 SEA ABB=ON  L53 AND L6
                 D SCAN TI

     FILE 'STNGUIDE' ENTERED AT 16:40:37 ON 01 FEB 2006
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FILE 'USPATFULL' ENTERED AT 16:45:46 ON 01 FEB 2006

L55 45 SEA ABB=ON TAMADA J?/AU
L56 76 SEA ABB=ON TIERNEY M?/AU
L57 600 SEA ABB=ON WILLIAMS S?/AU
L58 1253 SEA ABB=ON HYDROGELS/CT
L59 1 SEA ABB=ON L55 AND L56 AND L57
L60 12 SEA ABB=ON (L55 OR L56 OR L57) AND L58
L61 12030 SEA ABB=ON SKIN/CT
L62 3176 SEA ABB=ON TRANSDERM?/IT
L63 11 SEA ABB=ON L60 AND (L61 OR L62)
L64 35249 SEA ABB=ON L19
L65 3097 SEA ABB=ON L18
L66 10159 SEA ABB=ON (L16 OR L17)
L67 3 SEA ABB=ON L64 AND L65 AND L66 AND L58
L68 587 SEA ABB=ON (BUFFER#(L)PHOSPHATE)/IT
L69 3 SEA ABB=ON L64 AND (L68 OR L65) AND L66 AND L58
D SCAN TI
L70 45 SEA ABB=ON L64 AND L58 AND (L61 OR L62)
L71 7 SEA ABB=ON L64 AND L58 AND (L61 OR L62) AND (L65 OR L68 OR L66)

FILE 'WPIDS' ENTERED AT 16:49:21 ON 01 FEB 2006

L72 22 SEA ABB=ON TAMADA J?/AU
L73 48 SEA ABB=ON TIERNEY M?/AU
L74 619 SEA ABB=ON WILLIAMS S?/AU
L75 6388 SEA ABB=ON HYDROGEL# OR HYDRO GEL#
L76 4962 SEA ABB=ON TRANSDERM?
L77 139869 SEA ABB=ON SKIN
L78 1 SEA ABB=ON L72 AND L73 AND L74
L79 15 SEA ABB=ON (L72 OR L73 OR L74) AND L75
L80 11 SEA ABB=ON (L72 OR L73 OR L74) AND L75 AND (L76 OR L77)
L81 53358 SEA ABB=ON POLYETHYLENE OXIDE OR POLYVINYL(W)(PYRROLIDONE OR ALCOHOL) OR POLYACRYLIC ACID
L82 26141 SEA ABB=ON POLY ETHYLENE OXIDE OR (POLY VINYL)(W)(PYRROLIDONE OR ALCOHOL) OR POLY ACRYLIC ACID OR POLYACRYLATE OR POLY ACRYLATE
L83 4949 SEA ABB=ON PHOSPHATE#(2A)BUFFER#
L84 10887 SEA ABB=ON (SODIUM OR POTASSIUM)(2A)PHOSPHATE
L85 115187 SEA ABB=ON ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W)CHLORIDE
L86 12 SEA ABB=ON L75 AND (L81 OR L82) AND (L83 OR L84) AND L85

FILE 'BIOSIS' ENTERED AT 16:55:02 ON 01 FEB 2006

L87 14895 SEA ABB=ON L19
L88 804 SEA ABB=ON L18
L89 36410 SEA ABB=ON (L16 OR L17)
L90 4868 SEA ABB=ON HYDROGEL# OR HYDRO GEL#
L91 74 SEA ABB=ON TAMADA J?/AU
L92 209 SEA ABB=ON TIERNEY M?/AU
L93 4619 SEA ABB=ON WILLIAMS S?/AU
L94 0 SEA ABB=ON L91 AND L92 AND L93
L95 3 SEA ABB=ON (L91 OR L92 OR L93) AND L90
L96 13612 SEA ABB=ON PHOSPHATE#(2A)BUFFER#
L97 10457 SEA ABB=ON (SODIUM OR POTASSIUM)(2A)PHOSPHATE
L98 6629 SEA ABB=ON (L81 OR L82)
L99 74480 SEA ABB=ON ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W)CHLORIDE
L100 0 SEA ABB=ON (L87 OR L98) AND (L88 OR (L96 OR L97)) AND (L89 OR L99) AND L90
D QUE
L101 21 SEA ABB=ON (L87 OR L98) AND (L88 OR (L96 OR L97) OR L89 OR

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                L99) AND L90
L102      249772 SEA ABB=ON  TRANSDERM? OR SKIN
L103           2 SEA ABB=ON  L101 AND L102
L104        1028 SEA ABB=ON  HYDROPHILIC?(3A)POLYMER#
L105           0 SEA ABB=ON  (L87 OR L98 OR L104) AND (L88 OR (L96 OR L97)) AND
                (L89 OR L99) AND L90
L106           2 SEA ABB=ON  (L87 OR L98 OR L104) AND (L88 OR (L96 OR L97) OR
                L89 OR L99) AND L90 AND L102

     FILE 'BIOTECHNO, CEABA-VTB, ANABSTR' ENTERED AT 17:00:37 ON 01 FEB 2006
L107          21 SEA ABB=ON  L2
L108          47 SEA ABB=ON  L3
L109         691 SEA ABB=ON  L4
L110        2340 SEA ABB=ON  HYDROGEL# OR HYDRO GEL#
L111        4751 SEA ABB=ON  L19
L112        5652 SEA ABB=ON  (L81 OR L82)
L113         476 SEA ABB=ON  L18
L114       18090 SEA ABB=ON  PHOSPHATE#(2A) BUFFER#
L115        5941 SEA ABB=ON  (SODIUM OR POTASSIUM)(2A) PHOSPHATE
L116        7737 SEA ABB=ON  (L16 OR L17)
L117       30239 SEA ABB=ON  ELECTROLYTE# OR (SODIUM OR POTASSIUM)(W) CHLORIDE
L118           0 SEA ABB=ON  L107 AND L108 AND L109
L119           4 SEA ABB=ON  (L107 OR L108 OR L109) AND L110
L120         486 SEA ABB=ON  HYDROPHILIC?(3A) POLYMER#
L121           0 SEA ABB=ON  L110 AND ((L111 OR L112) OR L120) AND (L113 OR
                L114 OR L115) AND (L116 OR L117)
L122          13 SEA ABB=ON  L110 AND ((L111 OR L112) OR L120) AND (L113 OR
                L114 OR L115 OR L116 OR L117)
L123           1 SEA ABB=ON  L122 AND (TRANSDERM? OR SKIN)
L124           2 SEA ABB=ON  GLUCOSE AND L122
L125          10 SEA ABB=ON  L122 NOT (L123 OR L124)
L126          10 DUP REM L125 (0 DUPLICATES REMOVED)
                     ANSWERS '1-5' FROM FILE BIOTECHNO
                     ANSWERS '6-8' FROM FILE CEABA-VTB
                     ANSWERS '9-10' FROM FILE ANABSTR
L127         197 SEA ABB=ON  BISACRYLAMIDE OR (BIS(W)(ACRYLAMIDE OR ACRYL
                AMIDE))
L128          44 SEA ABB=ON  UNDECYLEN?
L129          19 SEA ABB=ON  L10
L130           1 SEA ABB=ON  L122 AND ((L127 OR L128 OR L129))

     FILE 'MEDLINE' ENTERED AT 17:11:16 ON 01 FEB 2006
L131          57 SEA ABB=ON  TAMADA J?/AU
L132         136 SEA ABB=ON  TIERNEY M?/AU
L133        3592 SEA ABB=ON  WILLIAMS S?/AU
                E HYDROGEL/CT
                E E3+ALL
L134        1106 SEA ABB=ON  HYDROGEL/CT
L135           0 SEA ABB=ON  (L131 AND L132 AND L133) OR ((L131 OR L132 OR
                L133) AND L134)
L136        6633 SEA ABB=ON  L19
L137        5396 SEA ABB=ON  (L112 OR L113)
                D TRIAL L136 1-10
L138        1517 SEA ABB=ON  POLYVINYL ALCOHOL/CT
                E POLYACRYL/CT
                E POLYACRYLIC/CT
L*** DEL    5116 S L136 NOT L138
                D TRIAL 100-105
L139        3814 SEA ABB=ON  POVIDONE/CT
L*** DEL    1354 S L*** NOT L139
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                D TRIAL 100-105
L140       15002 SEA ABB=ON  BUFFERS/CT
L141       59839 SEA ABB=ON  PHOSPHATES+NT/CT
L142       47830 SEA ABB=ON  POTASSIUM CHLORIDE/CT OR SODIUM CHLORIDE/CT
L143           0 SEA ABB=ON  L18
L144           0 SEA ABB=ON  L134 AND (L136 OR L137 OR L138 OR L139) AND (L140
                  AND L141) AND L142
L145          68 SEA ABB=ON  L134 AND (L136 OR L137 OR L138 OR L139)
L146           2 SEA ABB=ON  L134 AND (L136 OR L137 OR L138 OR L139) AND (L140
                  OR L141 OR L142)
                  D TRIAL 1-2
L147           0 SEA ABB=ON  (L136 OR L137 OR L138 OR L139) AND (L140 AND L141)
                  AND L142
L148        1644 SEA ABB=ON  L140 AND L141
L149        5593 SEA ABB=ON  TRANSDERM?
L150          39 SEA ABB=ON  L149 AND (L136 OR L137 OR L138 OR L139)
L151           1 SEA ABB=ON  L145 AND L149
                  D TRIAL
L152           1 SEA ABB=ON  L150 AND (L134 OR (L140 OR L141 OR L142))
                  D TRIAL

     FILE 'EMBASE' ENTERED AT 17:22:07 ON 01 FEB 2006
L153          51 SEA ABB=ON  TAMADA J?/AU
L154         145 SEA ABB=ON  TIERNEY M?/AU
L155        3019 SEA ABB=ON  WILLIAMS S?/AU
                  E HYDROGEL/CT
                  E E3+ALL
L156        4322 SEA ABB=ON  HYDROGEL/CT
L157       19537 SEA ABB=ON  L19
L158        2908 SEA ABB=ON  L18
                  D TRIAL 1-5
L159       59849 SEA ABB=ON  SODIUM CHLORIDE/CT OR POTASSIUM CHLORIDE/CT
L160           3 SEA ABB=ON  (L153 AND L154 AND L155) OR ((L153 OR L154 OR
                  L155) AND L156)
                  D TRIAL 1-3
L161        3813 SEA ABB=ON  BLOOD GLUCOSE MONITORING/CT
L162           0 SEA ABB=ON  L156 AND L157 AND L158 AND L159
L163          33 SEA ABB=ON  L157 AND L158 AND L159
L164       12772 SEA ABB=ON  TRANSDERM?
L165           0 SEA ABB=ON  L157 AND L158 AND L159 AND (L164 OR L161)
L166          51 SEA ABB=ON  L156 AND L157 AND (L158 OR L159 OR L161 OR L164)
L167           0 SEA ABB=ON  L156 AND L157 AND (L158 OR L159) AND (L161 OR
                  L164)
L168           1 SEA ABB=ON  L156 AND L157 AND L158
L169          23 SEA ABB=ON  L156 AND L157 AND L159
L170           4 SEA ABB=ON  L156 AND L157 AND L161
L171           0 SEA ABB=ON  L156 AND L157 AND L162
L172          23 SEA ABB=ON  L156 AND L157 AND L164
L173          46 SEA ABB=ON  L169 OR L172
                  D TRIAL 1-5
                  D TRIAL L160
                  D TRIAL L160 2-3
                  D QUE L173
L174          19 SEA ABB=ON  L156/MAJ AND L173
                  D TRIAL 1-5
L175         177 SEA ABB=ON  BISACRYLAMIDE OR (BIS(W)(ACRYLAMIDE OR ACRYL
                  AMIDE))
                  E UNDECYLEN/CT
                  E UNDECYLENIC/CT
                  E E4+ALL
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L176        204 SEA ABB=ON  10 UNDECENOIC ACID/CT OR L10
L177          0 SEA ABB=ON  L173 AND (L175 OR L176)
L178        708 SEA ABB=ON  TRANSDERMAL PATCH/CT
L179          5 SEA ABB=ON  L173 AND L178

     FILE 'STNGUIDE' ENTERED AT 17:39:05 ON 01 FEB 2006

     FILE 'CAPLUS' ENTERED AT 17:40:22 ON 01 FEB 2006
               D QUE L1
               D QUE L5
               D QUE L9
L180           9 SEA ABB=ON  L1 OR L5 OR L9

     FILE 'USPATFULL' ENTERED AT 17:40:24 ON 01 FEB 2006
               D QUE L59
               D QUE L63
L181          11 SEA ABB=ON  L59 OR L63

     FILE 'WPIDS' ENTERED AT 17:40:25 ON 01 FEB 2006
               D QUE L78
               D QUE L80
L182          11 SEA ABB=ON  L78 OR L80

     FILE 'BIOSIS' ENTERED AT 17:40:28 ON 01 FEB 2006
               D QUE L95

     FILE 'EMBASE' ENTERED AT 17:40:29 ON 01 FEB 2006
               D QUE L160

     FILE 'BIOTECHNO, CEABA-VTB, ANABSTR' ENTERED AT 17:41:18 ON 01 FEB 2006
               D QUE L119

     FILE 'MEDLINE' ENTERED AT 17:41:20 ON 01 FEB 2006
               D QUE L135

     FILE 'STNGUIDE' ENTERED AT 17:41:28 ON 01 FEB 2006

     FILE 'CAPLUS, EMBASE, BIOTECHNO, ANABSTR, BIOSIS, WPIDS, USPATFULL'
     ENTERED AT 17:42:18 ON 01 FEB 2006
L183          32 DUP REM L180 L160 L119 L95 L182 L181 (9 DUPLICATES REMOVED)
                    ANSWERS '1-9' FROM FILE CAPLUS
                    ANSWERS '10-12' FROM FILE EMBASE
                    ANSWERS '13-15' FROM FILE ANABSTR
                    ANSWER '16' FROM FILE BIOSIS
                    ANSWERS '17-24' FROM FILE WPIDS
                    ANSWERS '25-32' FROM FILE USPATFULL
               D IBIB ED ABS HITIND 1-9
               D IALL 10-24
               D IBIB AB 25-32

     FILE 'STNGUIDE' ENTERED AT 17:43:40 ON 01 FEB 2006

     FILE 'CAPLUS' ENTERED AT 17:44:24 ON 01 FEB 2006
               D QUE L26
               D QUE L38
               D QUE L45
L184          12 SEA ABB=ON  (L26 OR L38 OR L45) NOT L180
               D IBIB ED ABS HITRN 1-12

     FILE 'CAPLUS' ENTERED AT 17:44:50 ON 01 FEB 2006
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                D QUE L36
                D QUE L49
L185         11 SEA ABB=ON  (L36 OR L49) NOT (L180 OR L184)
                D IBIB ED ABS HITIND 1-11

     FILE 'STNGUIDE' ENTERED AT 17:45:23 ON 01 FEB 2006

     FILE 'CAPLUS' ENTERED AT 17:48:00 ON 01 FEB 2006
                D QUE L50
                D QUE L52
                D QUE L54
L186          8 SEA ABB=ON  (L50 OR L52 OR L54) NOT (L180 OR L184 OR L185)

     FILE 'USPATFULL' ENTERED AT 17:48:01 ON 01 FEB 2006
                D QUE L69
                D QUE L71
L187          8 SEA ABB=ON  (L69 OR L71) NOT L181

     FILE 'WPIDS' ENTERED AT 17:48:03 ON 01 FEB 2006
                D QUE L86
L188         11 SEA ABB=ON  L86 NOT L182

     FILE 'BIOSIS' ENTERED AT 17:48:05 ON 01 FEB 2006
                D QUE L106
                D QUE L105
L189          2 SEA ABB=ON  L106 NOT L95

     FILE 'MEDLINE' ENTERED AT 17:48:07 ON 01 FEB 2006
                D QUE L152

     FILE 'EMBASE' ENTERED AT 17:48:08 ON 01 FEB 2006
                D QUE L162
                D QUE L165
                D QUE L170
                D QUE L179
L190         10 SEA ABB=ON  (L168 OR L170 OR L179) NOT L160

     FILE 'BIOTECHNO, CEABA-VTB, ANABSTR' ENTERED AT 17:48:09 ON 01 FEB 2006
                D QUE L121
                D QUE L123
                D QUE L124
                D QUE L130
L191          4 SEA ABB=ON  (L123 OR L124 OR L130) NOT L119

     FILE 'STNGUIDE' ENTERED AT 17:48:19 ON 01 FEB 2006

     FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, BIOTECHNO, ANABSTR, WPIDS,
     USPATFULL' ENTERED AT 17:49:00 ON 01 FEB 2006
L192         39 DUP REM L186 L152 L189 L190 L191 L188 L187 (5 DUPLICATES REMOVE
                     ANSWERS '1-8' FROM FILE CAPLUS
                     ANSWER '9' FROM FILE MEDLINE
                     ANSWERS '10-11' FROM FILE BIOSIS
                     ANSWERS '12-21' FROM FILE EMBASE
                     ANSWERS '22-24' FROM FILE BIOTECHNO
                     ANSWER '25' FROM FILE ANABSTR
                     ANSWERS '26-34' FROM FILE WPIDS
                     ANSWERS '35-39' FROM FILE USPATFULL
                D IBIB ED ABS HITIND 1-8
                D IALL 1-24
                D ALL 25
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D IALL 26-34
D IBIB AB HITRN 35-39

FILE 'HOME' ENTERED AT 17:49:51 ON 01 FEB 2006

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